

Final Environmental Impact Report/
Environmental Impact Statement
Fresno to Bakersfield Section

Standard Responses

to the

Draft EIR/EIS
and the
Revised Draft EIR/Supplemental Draft EIS

April 2014

This page intentionally left blank.

Table of Contents

STANDARD RESPONSES TO FREQUENTLY RAISED COMMENTS	1
STANDARD RESPONSES	1
GENERAL	1
<i>FB-Response-GENERAL-01: Tiering and Level of Detail in Analysis and Mitigation</i>	<i>1</i>
<i>FB-Response-GENERAL-02: Alternatives</i>	<i>8</i>
<i>FB-Response-GENERAL-03: HST and Growth in the San Joaquin Valley – Measures to Realize Densification Benefits of HST – Role of Local Governments/Station Area Cities and Counties in Making it Happen</i>	<i>25</i>
<i>FB-Response-GENERAL-04: Impacts to Agricultural Lands and the Agricultural Economy</i>	<i>29</i>
<i>FB-Response-GENERAL-05: Community Impacts – Focus on Impacts for Communities That Would Not Have a Station</i>	<i>32</i>
<i>FB-Response-GENERAL-06: Relationship of the Authority’s Business Plan to the Analysis in the EIR/EIS</i>	<i>36</i>
<i>FB-Response-GENERAL-07: Length of Review Period for the Draft EIR/EIS and the Revised DEIR/Supplemental DEIS</i>	<i>39</i>
<i>FB-Response-GENERAL-08: Consultation with Public Agencies</i>	<i>43</i>
<i>FB-Response-GENERAL-09: General Support of HST</i>	<i>43</i>
<i>FB-Response-GENERAL-10: Support of/Opposition to Fresno to Bakersfield Section Alternatives</i>	<i>44</i>
<i>FB-Response-GENERAL-11: Comments with Opinion Only</i>	<i>47</i>
<i>FB-Response-GENERAL-12: Impact of HST on Existing Amtrak Service</i>	<i>48</i>
<i>FB-Response-GENERAL-13: Analysis of Amtrak on Central Valley Sections</i>	<i>48</i>
<i>FB-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)</i>	<i>54</i>
<i>FB-Response-GENERAL-15: HMF Decision</i>	<i>60</i>
<i>FB-Response-GENERAL-16: Public Outreach</i>	<i>61</i>
<i>FB-Response-GENERAL-17: Funding and Project Costs</i>	<i>63</i>
<i>FB-Response-GENERAL-18: Employment Opportunities</i>	<i>65</i>
<i>FB-Response-GENERAL-19: EIR/EIS Economic Benefits Assume Completion of Statewide Project</i>	<i>66</i>
<i>FB-Response-GENERAL-20: Improper Piece-mealing of Statewide Project</i>	<i>67</i>
<i>FB-Response-GENERAL-21: Project Description Level of Detail</i>	<i>67</i>
<i>FB-Response-GENERAL-22: Justifying the Baseline of Study</i>	<i>69</i>
<i>FB-Response-GENERAL-23: HST Ticket Fares</i>	<i>70</i>
<i>FB-Response-GENERAL-24: Ridership</i>	<i>72</i>
<i>FB-Response-GENERAL-25: Bakersfield Alternatives</i>	<i>74</i>
<i>FB-Response-GENERAL-26: Length of the EIR/EIS</i>	<i>77</i>
<i>FB-Response-GENERAL-27: CEQA, NEPA, and Executive Order 12898 Compliance</i>	<i>78</i>
<i>FB-Response-GENERAL-28: Response to Comments Received After the Close of the Public Comment Period</i>	<i>79</i>
TRANSPORTATION	81
<i>FB-Response-TR-01: Construction Period Traffic Management Plan</i>	<i>81</i>
<i>FB-Response-TR-02: Road Closures</i>	<i>82</i>
<i>FB-Response-TR-03: Station Parking</i>	<i>83</i>
AIR QUALITY	85
<i>FB-Response-AQ-01: Dust from train operation</i>	<i>85</i>
<i>FB-Response-AQ-02: General Environmental Concern</i>	<i>86</i>
<i>FB-Response-AQ-03: Increased Emissions Due to Re-routed Travel of Farm Vehicles</i>	<i>86</i>
<i>FB-Response-AQ-04: Localized Air Emission Increase</i>	<i>86</i>
<i>FB-Response-AQ-05: Mitigation</i>	<i>87</i>
NOISE AND VIBRATION	89
<i>FB-Response-N&V-01: Animal Effects</i>	<i>89</i>
<i>FB-Response-N&V-02: Schools</i>	<i>89</i>

<i>FB-Response-N&V-03: General Assessment Methodology Concerns - Use of FRA Methodology/Criteria</i>	90
<i>FB-Response-N&V-04: Vibration Damage (Noise Damage)</i>	93
<i>FB-Response-N&V-05: Determining Mitigation</i>	93
PUBLIC UTILITIES AND ENERGY	95
<i>FB-Response-PU&E-01: Analysis of Traction Power Stations and Project Driven Transmission Line Upgrades</i>	95
<i>FB-Response-PU&E-02: Electricity Supply Impacts</i>	96
<i>FB-Response-PU&E-03: Utility Coordination for Final Design</i>	97
BIOLOGICAL RESOURCES	99
<i>FB-Response-BIO-01: Wildlife Habitat and Wildlife Movement Corridors</i>	99
<i>FB-Response-BIO-02: Mitigation Measures (Resources, Details and Phasing, Responsibilities and Future Planning)</i>	103
<i>FB-Response-BIO-03: General Response for Surveys Conducted to Inform the EIR/EIS, and use of Preconstruction and Protocol-level Surveys as Mitigation</i>	106
HYDROLOGY AND WATER RESOURCES	111
<i>FB-Response-HWR-01: Water System Impacts – District</i>	111
<i>FB-Response-HWR-02: Site-Specific Drainage Impacts</i>	113
<i>FB-Response-HWR-03: Floodplain Impacts - Inadequate Detail</i>	114
<i>FB-Response-HWR-04: Regional Water Supply Impacts</i>	117
<i>FB-Response-HWR-05: Water Pollution Control</i>	118
HAZARDOUS MATERIALS AND WASTES	119
<i>FB-Response-HMW-01: Less than Significant Impact to Schools</i>	119
<i>FB-Response-HMW-02: Construction on or in Proximity to PEC sites</i>	120
SAFETY AND SECURITY	121
<i>FB-Response-S&S-01: Traffic Safety</i>	121
<i>FB-Response-S&S-02: Derailment and Intrusion Concerns</i>	121
<i>FB-Response-S&S-03: Information on Increased Demand on Emergency Providers</i>	123
<i>FB-Response-S&S-04: Mitigation Measure #1</i>	123
<i>FB-Response-S&S-05: Security Concerns/Emergency Response</i>	124
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	125
<i>FB-Response-SO-01: Acquisitions, Displacements, and Relocations</i>	125
<i>FB-Response-SO-02: Property Values – HST Project Lower Property Values Due to a Nearby Station or HST Alignment that Generates Noise/Visual Impact</i>	129
<i>FB-Responses-SO-03: Business Impacts – Construction/Operation Would Create Too Many Impacts on Businesses</i>	130
<i>FB-Response-SO-04: Neighborhood Impacts – HST Project Results in Impacts on Neighborhoods</i>	132
<i>FB-Response-SO-05: Loss of Property and Sales Tax Revenues</i>	133
<i>FB-Response-SO-06: Impacts on East Bakersfield</i>	136
<i>FB-Response-SO-07: Environmental Justice/Outreach</i>	136
<i>FB-Response-SO-08: Effects on Bakersfield High School</i>	139
STATION PLANNING, LAND USE, AND DEVELOPMENT	141
<i>FB-Response-LU-01: Regional Growth/Land Use – Urban Sprawl</i>	141
<i>FB-Response-LU-02: Land Use – Conversion/Consistency</i>	142
<i>FB-Response-LU-03: Significance of Land Use Impacts</i>	144
<i>FB-Response-LU-04: Effects on Future Land Use</i>	147
AGRICULTURAL LANDS	149
<i>FB-Response-AG-01: Farmland Impacts – General</i>	149
<i>FB-Response-AG-02: Severance – General Response including Roadway Impacts</i>	151
<i>FB-Response-AG-03: Severance – Non-Economic Remnants</i>	154
<i>FB-Response-AG-04: Severance – Farm Infrastructure</i>	156
<i>FB-Response-AG-05: Pesticide Spraying/Dust/Pollination</i>	158
<i>FB-Response-AG-06: Confined Animal Facilities</i>	159
<i>FB-Response-AG-07: Williamson Act and Farmland Protection Policy Act</i>	160
AESTHETICS AND VISUAL RESOURCES	163

<i>FB-Response-AVR-01: Blocked Views</i>	163
<i>FB-Response-AVR-02: Community Character</i>	165
<i>FB-Response-AVR-03: Mitigate or Minimize</i>	166
<i>FB-Response-AVR-04: Overpasses and Elevated Guideways</i>	168
CULTURAL AND PALEONTOLOGICAL RESOURCES	169
<i>FB-Response-CUL-01: Documentation of Existing/Additional Built Environment Resources</i>	169
<i>FB-Response-CUL-02: Documentation of Existing/Additional Archaeological Resources</i>	171
<i>FB-Response-CUL-03: Mitigation Measures</i>	172
<i>FB-Response-CUL-04: Additional Interested Parties/Consulting Parties</i>	173

This page intentionally left blank.

Standard Responses to Frequently Raised Comments

As part of the public review process for the 2011 Draft EIR/EIS, the Authority and FRA received approximately 1,450 written comment letters and verbal comments at public hearings containing approximately 3,200 individual comments on the Draft EIR/EIS and on the proposed project generally. As part of the public review process for the 2012 Revised Draft EIR/Supplemental Draft EIS, the Authority and FRA received approximately 800 written comment letters and verbal comments at public hearing containing approximately 4,700 individual comments. Many of the comments received during the 2011 and 2012 public comment periods raised similar issues about the project and its environmental impacts. The Authority and FRA have therefore prepared a chapter of standard responses to address the most frequently raised issues.

The standard responses provide a comprehensive response to an issue so that multiple aspects of the issue are addressed in an organized manner in one location. This reduces repetition of responses. When an individual comment raises an issue discussed in a standard response, the response to the individual comment includes a cross-reference to the appropriate standard response.


This page intentionally left blank.

Standard Responses

Comment Summary	Response
GENERAL	FB-Response-GENERAL-01: Tiering and Level of Detail in Analysis and Mitigation
<p>Some comments have registered concern over the review of the Fresno to Bakersfield Section in the context of the statewide HST Project, have questioned the lead agencies' use of tiering or claimed improper tiering, and suggested an alleged lack of detail in the analysis and in the mitigation measures.</p>	<p>California has been planning a high-speed train (HST) System since the formation of the High-Speed Rail Authority (Authority) in 1996. When completed, the nearly 800-mile train system would provide new passenger rail service to more than 90% of the state's population. More than 200 weekday trains would serve the statewide intercity travel market. The HST would be similar to electrically powered systems now in operation in Europe and Japan, capable of up to 220-mile-per-hour (mph) operating speeds, with state-of-the-art safety, signaling, and automatic train control systems. Phase 1 of the HST System would connect and serve the major metropolitan areas of California, extending from San Francisco to the Los Angeles Basin. Phase 2 would add connections from Sacramento in the north to San Diego in the south.</p> <p>The approximately 114-mile-long Fresno to Bakersfield Section is an essential part of this system. The Fresno to Bakersfield Section would provide Bakersfield and Fresno access to a new transportation mode, and would contribute to increased mobility throughout California.</p> <p><i>The Lead Agencies' Tiering Process for the High-Speed Train System</i></p> <p>Both CEQA and NEPA require that an agency consider the environmental effects of its actions and develop environmental documentation at the earliest point in time when the analysis is meaningful. Both CEQA and NEPA provide agencies with some discretion to fashion an environmental process as appropriate for the actions or projects they are considering. Program or first-tier EIR/EISs are deliberately focused on the "big picture" impacts of proposed actions and the broad policy choices related to such actions. To avoid repetition and to help focus the document on issues ripe for decision, a lead agency may tier its environmental documents so that later Program or second-tier EIR/EISs incorporate and build upon the analysis and decisions made at the Program level. A first-tier EIR/EIS may therefore be limited to the analytical information necessary for an informed decision on the broad policy issues presented, with detailed analysis of potential impacts of a more specific, site-specific decision to follow when a second-tier EIR/EIS is prepared.</p> <p>With this in mind, and as described in both the Executive Summary and Chapters 1 and 2, the Authority and the Federal Railroad Administration (FRA) previously decided to use a tiered environmental review process and prepared the Statewide Program EIR/EIS in 2005 (Authority and FRA 2005). The 2005 first-tier EIR/EIS analyzed the impacts of implementing the 800-mile statewide HST System and compared those impacts with the impacts of a no project alternative and an alternative of improving airports and freeways to meet the state's future transportation needs. The HST alternative included consideration of different train technologies/vehicle types, as well as different broad alignment corridors and station locations. The purpose of the analysis was to support broad policy decisions on whether to pursue a high-speed train system, what type, and where. At the conclusion of that process, the agencies made the following first-tier decisions:</p>

Comment Summary	Response																								
GENERAL	FB-Response-GENERAL-01: Tiering and Level of Detail in Analysis and Mitigation																								
	<table border="1"> <thead> <tr> <th colspan="2">2005 Tier 1 Decisions</th></tr> </thead> <tbody> <tr> <td>Selection of transportation option</td><td>Selected the HST alternative over modal alternative (expanded airports and freeways) and no project alternative (do nothing) to serve California's growing transportation needs</td></tr> <tr> <td>Selection of train technology</td><td>Selected very high speed (VHS), electrified steel wheel on steel rail technology over magnetic levitation, lower speed, electrified steel wheel on steel rail; and lower speed diesel (non-electrified) steel wheel on steel rail</td></tr> <tr> <td>Selection of preferred alignment corridors</td><td>Selected preferred alignment corridors for most of the statewide system to be studied in more detail in second-tier EIR/EISs, including the BNSF corridor between Fresno and Bakersfield and downtown stations locations in Fresno and Bakersfield. Elected to further study a potential station in the Visalia area. Deferred selection of preferred alignment corridors for Bay Area to Central Valley to a second Tier 1 EIR/EIS process</td></tr> <tr> <td>Selection of preferred station locations</td><td>Selected station locations along the preferred alignment corridors to be studied in more detail in second-tier EIR/EISs</td></tr> <tr> <td>Adoption of mitigation strategies</td><td>Adopted broad mitigation strategies to be refined and applied at the second tier, as part of project planning and development and environmental review</td></tr> <tr> <td colspan="2"> <p>These decisions were not subject to legal challenge (FRA 2005; Authority 2005). The Authority and FRA prepared a second program EIR/EIS to address the connection between the Bay Area and the northern part of the Central Valley (i.e., north of Fresno), which was completed in 2008 (Authority and FRA 2008). State litigation resulted in the Authority preparing and circulating revised analysis in 2010, and again in 2012, leading to completion of a Partially Revised Final Program EIR in 2012 (Authority 2012). The FRA's 2008 decision and the Authority's 2012 decision can be summarized as follows:</p> </td></tr> <tr> <th colspan="2">2008/2012 Tier 1 Decisions</th></tr> <tr> <td>Selection of preferred alignment corridors</td><td>Selected preferred alignment corridors for connecting the Bay Area to the Central Valley north of Fresno to be studied in more detail in second-tier EIR/EIS documents for the geographic sections between San Francisco and Fresno.</td></tr> <tr> <td>Selection of preferred station locations</td><td>Stations locations along the preferred alignment corridors subject to be studied in more detail in second-tier EIR/EISs</td></tr> <tr> <td>Adoption of mitigation strategies</td><td>Adopted broad mitigation strategies to be refined and applied at the second tier, as part of project planning and development and environmental review</td></tr> <tr> <td colspan="2"> <p>The text in Chapter 1 has been revised to provide further clarification on the first-tier decisions. These first-tier decisions</p> </td></tr> </tbody> </table>	2005 Tier 1 Decisions		Selection of transportation option	Selected the HST alternative over modal alternative (expanded airports and freeways) and no project alternative (do nothing) to serve California's growing transportation needs	Selection of train technology	Selected very high speed (VHS), electrified steel wheel on steel rail technology over magnetic levitation, lower speed, electrified steel wheel on steel rail; and lower speed diesel (non-electrified) steel wheel on steel rail	Selection of preferred alignment corridors	Selected preferred alignment corridors for most of the statewide system to be studied in more detail in second-tier EIR/EISs, including the BNSF corridor between Fresno and Bakersfield and downtown stations locations in Fresno and Bakersfield. Elected to further study a potential station in the Visalia area. Deferred selection of preferred alignment corridors for Bay Area to Central Valley to a second Tier 1 EIR/EIS process	Selection of preferred station locations	Selected station locations along the preferred alignment corridors to be studied in more detail in second-tier EIR/EISs	Adoption of mitigation strategies	Adopted broad mitigation strategies to be refined and applied at the second tier, as part of project planning and development and environmental review	<p>These decisions were not subject to legal challenge (FRA 2005; Authority 2005). The Authority and FRA prepared a second program EIR/EIS to address the connection between the Bay Area and the northern part of the Central Valley (i.e., north of Fresno), which was completed in 2008 (Authority and FRA 2008). State litigation resulted in the Authority preparing and circulating revised analysis in 2010, and again in 2012, leading to completion of a Partially Revised Final Program EIR in 2012 (Authority 2012). The FRA's 2008 decision and the Authority's 2012 decision can be summarized as follows:</p>		2008/2012 Tier 1 Decisions		Selection of preferred alignment corridors	Selected preferred alignment corridors for connecting the Bay Area to the Central Valley north of Fresno to be studied in more detail in second-tier EIR/EIS documents for the geographic sections between San Francisco and Fresno.	Selection of preferred station locations	Stations locations along the preferred alignment corridors subject to be studied in more detail in second-tier EIR/EISs	Adoption of mitigation strategies	Adopted broad mitigation strategies to be refined and applied at the second tier, as part of project planning and development and environmental review	<p>The text in Chapter 1 has been revised to provide further clarification on the first-tier decisions. These first-tier decisions</p>	
2005 Tier 1 Decisions																									
Selection of transportation option	Selected the HST alternative over modal alternative (expanded airports and freeways) and no project alternative (do nothing) to serve California's growing transportation needs																								
Selection of train technology	Selected very high speed (VHS), electrified steel wheel on steel rail technology over magnetic levitation, lower speed, electrified steel wheel on steel rail; and lower speed diesel (non-electrified) steel wheel on steel rail																								
Selection of preferred alignment corridors	Selected preferred alignment corridors for most of the statewide system to be studied in more detail in second-tier EIR/EISs, including the BNSF corridor between Fresno and Bakersfield and downtown stations locations in Fresno and Bakersfield. Elected to further study a potential station in the Visalia area. Deferred selection of preferred alignment corridors for Bay Area to Central Valley to a second Tier 1 EIR/EIS process																								
Selection of preferred station locations	Selected station locations along the preferred alignment corridors to be studied in more detail in second-tier EIR/EISs																								
Adoption of mitigation strategies	Adopted broad mitigation strategies to be refined and applied at the second tier, as part of project planning and development and environmental review																								
<p>These decisions were not subject to legal challenge (FRA 2005; Authority 2005). The Authority and FRA prepared a second program EIR/EIS to address the connection between the Bay Area and the northern part of the Central Valley (i.e., north of Fresno), which was completed in 2008 (Authority and FRA 2008). State litigation resulted in the Authority preparing and circulating revised analysis in 2010, and again in 2012, leading to completion of a Partially Revised Final Program EIR in 2012 (Authority 2012). The FRA's 2008 decision and the Authority's 2012 decision can be summarized as follows:</p>																									
2008/2012 Tier 1 Decisions																									
Selection of preferred alignment corridors	Selected preferred alignment corridors for connecting the Bay Area to the Central Valley north of Fresno to be studied in more detail in second-tier EIR/EIS documents for the geographic sections between San Francisco and Fresno.																								
Selection of preferred station locations	Stations locations along the preferred alignment corridors subject to be studied in more detail in second-tier EIR/EISs																								
Adoption of mitigation strategies	Adopted broad mitigation strategies to be refined and applied at the second tier, as part of project planning and development and environmental review																								
<p>The text in Chapter 1 has been revised to provide further clarification on the first-tier decisions. These first-tier decisions</p>																									

Comment Summary	Response
GENERAL	FB-Response-GENERAL-01: Tiering and Level of Detail in Analysis and Mitigation
	<p>(proceed with high-speed train system, VHS electrified steel-wheel-on-steel-rail train technology, statewide system map shown here, and mitigation strategies) established the broad framework for the HST System that shapes the scope of issues and project elements ripe for consideration and decision at the second tier (.e.g., this current second-tier Fresno to Bakersfield section decision). The issues ripe for decision through this second-tier Fresno to Bakersfield project-level EIR/EIS process is the precise location of the project (alignment, ancillary facilities, station), as well as detailed mitigation measures to address impacts.</p> <p>To facilitate second-tier project planning and environmental review, the lead agencies divided the roughly 800-mile statewide system into discrete independent project sections appropriate for evaluation in second-tier environmental documents. The Fresno to Bakersfield Section is one of these discrete portions of the larger HST System (refer to Exhibit GENERAL-01.1). The Fresno to Bakersfield section is fully consistent with the prior first-tier EIR/EISs and decisions. The geographic scope is consistent with the 2005 Statewide Program EIR/EIS geographic scope. The train technology, alignments and stations in the Fresno to Bakersfield Section EIR/EIS are consistent with prior first-tier decisions. This document utilizes the mitigation strategies adopted with the first-tier decisions to avoid and minimize impacts through incorporation into project features and design, as well as by refining the general mitigation strategies into detailed mitigation measures. This project-level EIR/EIS has been prepared in the context of the previous broader analysis, but focused on the alternatives ripe for consideration and potential decision at the second tier. It provides a detailed description of the project alternatives for the Fresno to Bakersfield section and detailed analysis about the potential impacts from construction and operations in the Fresno to Bakersfield Section. The Fresno to Bakersfield Section Project EIR/EIS therefore builds on the prior, more general program EIR/EIS analysis, but focuses on the more detailed, second-tier project.</p> <p>In summary, the Fresno to Bakersfield Section EIR/EIS properly tiers by: being consistent with the broad policy decisions previously reached about the system; explaining the relationship between the first tier and the second tier (Program EIR/EISs and project-level EIR/EIS); utilizing the Program EIR/EISs for background information and to inform the second-tier analysis, and making the Program EIR/EISs available to the public; and by focusing on and analyzing the impacts of implementing a specifically defined high-speed train project between Fresno to Bakersfield.</p> <p><i>Tiering and Incorporation By Reference</i></p> <p>Some comments assert the Fresno to Bakersfield Section EIR/EIS does not adequately incorporate the program EIR/EISs by reference and does not properly tier for this reason. The Authority and FRA do not agree with these comments. Both NEPA and CEQA encourage tiering of environmental documents and the use of incorporation by reference to avoid repetition in tiered documents and to focus them on the issues ripe for decision at a particular tier. Under NEPA, a tiered EIS may incorporate material by reference, and it must be cited, described, and made available for inspection (40 CFR §§ 1502.20, 1502.21). Under CEQA, a tiered EIR may be incorporated by reference, and if it is it must be briefly summarized and made available for inspection (CEQA Guidelines, §§ 15152, 15150).</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-01: Tiering and Level of Detail in Analysis and Mitigation
	 <p>Exhibit GENERAL-01.1: Map based on Tier 1 decisions in 2005, 2008, and 2012</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-01: Tiering and Level of Detail in Analysis and Mitigation
	<p>The Fresno to Bakersfield Section EIR/EIS does not directly incorporate by reference the HST program EIR/EIS documents as whole, nor is it required to do so. Nevertheless, the Fresno to Bakersfield Section EIR/EIS describes the tiered environmental process and the program EIR/EISs' content and purpose in the Executive Summary, Chapter 1, and Chapter 2 and these documents are cited in Chapter 11. The 2005 Program EIR/EIS, the 2008 Program EIR/EIS, and the 2012 Partially Revised Final Program EIR, along with the FRA and Authority decision documents from 2005, 2008, and 2012 have been available on the Authority's website throughout the Fresno to Bakersfield EIR/EIS process and their availability identified in the Executive Summary at section S.2. Where specific materials from the program EIR/EIS documents have been used in the Fresno to Bakersfield Section EIR/EIS for specific areas of analysis (e.g., regional growth, cumulative impacts), the material is cited in the EIR/EIS and its content briefly described as required by 40 CFR § 1502.21 and CEQA Guidelines § 15150, and it has been made available to the public.</p> <p>The Fresno to Bakersfield Section EIR/EIS properly tiers from the program EIR/EIS documents by going from the more general to the more specific and by complying with the procedures set forth in CEQA Guidelines and CEQ regulations for implementing NEPA. In a project-level EIR/EIS that follows a program EIR/EIS (or put another way, a second-tier EIR following a first-tier EIR/EIS), tiering has the effect of focusing the analysis on a narrower geographic area and the more specifically defined project. By contrast, incorporation by reference can serve to bring into an EIR/EIS portions of entirely unrelated documents, provided the requirements of CEQA Guidelines Section 15150 and 40 CFR 1502.20 are met, and can be visualized as expanding the analysis, rather than narrowing it. Incorporation by reference can be used without tiering, and represents a separate procedure from tiering. For tiering, the later EIR/EIS must refer to any prior EIR/EIS being used for tiering and state where a copy of the prior EIR/EIS may be examined (refer to CEQA Guidelines Section 15152, Section (g) and 40 CFR 1502.20). The Fresno to Bakersfield Section EIR/EIS satisfies these requirements.</p> <p><i>Level of Detail in Second-Tier Impacts Analysis</i></p> <p>Some comments suggest the analysis in the Fresno to Bakersfield Section EIR/EIS is insufficiently detailed for a second-tier or project-level EIR/EIS. This is not the case and the EIR/EIS fully suffices as a second-tier EIR/EIS. The Fresno to Bakersfield Section Project EIR/EIS analyzes the environmental impacts, both adverse and beneficial, of implementing the HST between Fresno and Bakersfield at an appropriate second-tier level of detail. This EIR/EIS is based on detailed project planning and design specific to the Fresno to Bakersfield Section. The impacts analysis therefore provides site-specific information about the potential environmental impacts of the Fresno to Bakersfield Section of the HST System.</p> <p>The HST would be a "design-build" project. That is, the project final engineering design would be completed by the contractor who would be chosen to build the project. The EIR/EIS includes, however, a thorough description of alternatives based on a sufficient level of design to fully identify and disclose potential environmental impacts. At the time the prior Draft EIR/EIS was released for public review in August 2011 (Authority and FRA 2011a), the Fresno to Bakersfield Section had reached what is called a 15% level of design in engineering terms. The Final EIR/EIS represents a 15-30% level of engineering design. These are engineering terms of art that should not be confused with percentage completeness of the EIR/EIS's project description. Final or even advanced engineering is not necessary to identify potential environmental impacts. The engineering and planning work done was sufficient to identify and describe all project components and disclose environmental impacts,</p>

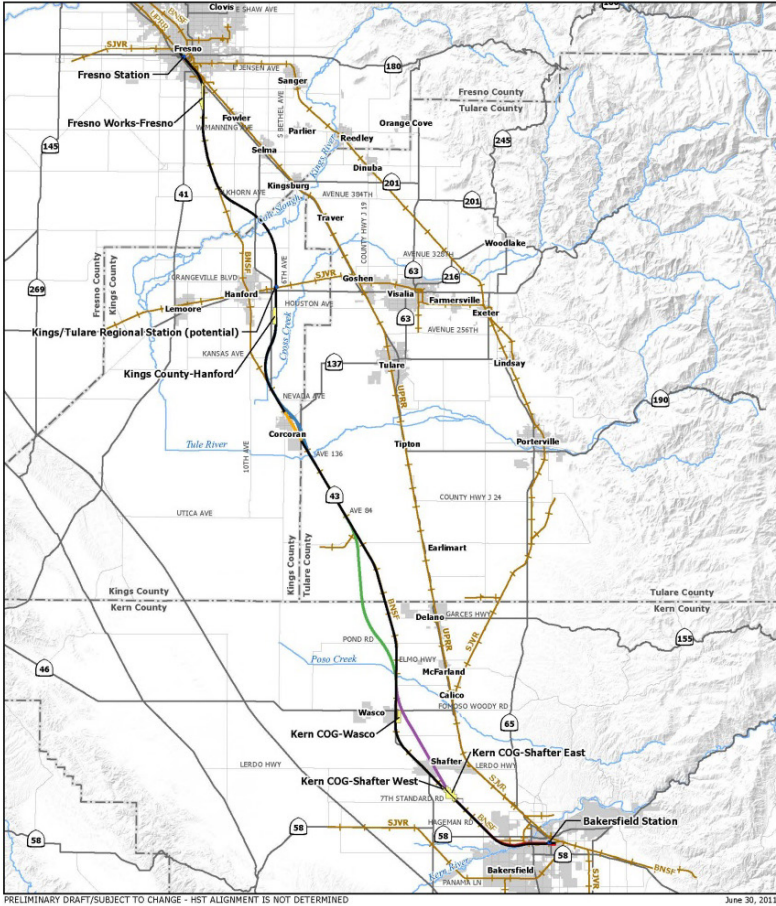
Comment Summary	Response
GENERAL	FB-Response-GENERAL-01: Tiering and Level of Detail in Analysis and Mitigation
	<p>consistent with CEQA and NEPA requirements. Neither CEQA nor NEPA require a final design or even near-final design as a predicate to environmental analysis. In addition, the use of a preliminary level of engineering design is common in large transportation infrastructure projects, particularly design-build project, where the environmental analysis process occurs before completion of final engineering design.</p> <p>Based on the detailed project definition, the EIR/EIS provides a second-tier project-level environmental analysis of implementing the HST in the Fresno to Bakersfield section of the statewide system. The EIR/EIS includes a detailed discussion of the environmental baseline in each resource area based on extensive research, including on-site surveys of all parcels where the property owner provided permission for access. Where permission for an on-site survey was not granted, the analysts used the best available alternative methods to disclose all that is reasonably possible about existing conditions. The impacts analysis in each resource area focuses on the direct and indirect impacts in Fresno, Kings, Tulare, and Kern counties where project infrastructure would be constructed. The cumulative impacts analysis examines environmental resource areas more broadly, depending on the resource area, but in doing so provides the appropriate level of detail for a second-tier project analysis.</p> <p>For a linear project crossing 114 miles and four counties, it is not possible to include descriptive parcel-by-parcel impacts discussion in the main text of the EIR/EIS. To do so would result in an environmental document that would be so large and unwieldy that it would not serve its information value. For this reason, and consistent with the focus of both CEQA and NEPA that an EIR/EIS serve as an informational tool for the public and decision makers, the impacts analysis in Volume 1 of the EIR/EIS includes summarized technical information sufficient to allow a full assessment of the significant environmental impacts of the project. Additional details are provided in Volume 2 appendices, as well as in detailed technical reports that were identified within the EIR/EIS Volume 1 text and which have all been available on the Authority's website or made available upon request.</p> <p><i>Level of Detail in Second-Tier Mitigation Measures</i></p> <p>Some comments question the sufficiency of the mitigation measures for a second-tier EIR/EIS. The EIR/EIS mitigation measures are sufficient. CEQA requires the Authority to analyze the potential impacts of the HST and identify enforceable mitigation for each significant effect of the project and to mitigate or avoid the significant effects on the environment by adopting feasible mitigation measures as part of the project (Public Resources Code Section 21001.2). NEPA requires that all relevant, reasonable mitigation measures are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies (40 CFR 1502.16(h), 1505.2(c)).</p> <p>As explained throughout Chapter 3 of the EIR/EIS, the Authority and FRA developed the project definition by incorporating certain of the programmatic mitigation strategies adopted at the conclusion of the program EIR/EIS processes into the project itself, as mechanisms to avoid and minimize impacts through careful planning and design. The EIR/EIS also identifies further strategies and measures to avoid or reduce adverse impacts result from construction or operation of the Project. These measures are identified broadly in each resource section as Project Design features. These Project Design Features will be</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-01: Tiering and Level of Detail in Analysis and Mitigation
	<p>enforced through the Mitigation Monitoring Enforcement Plan (MMEP) that will be included with the Authority and FRA's decision documents. Where the detailed impacts analysis revealed adverse impacts that required mitigation, the EIR/EIS includes detailed mitigation measures to address the adverse impacts. Many of the mitigation measures are refinements of programmatic mitigation strategies, while others are newly developed and specific to this EIR/EIS.</p> <p>Some comments nevertheless suggest that the EIR/EIS has inappropriately deferred the identification of the detailed mitigation measures necessary to address the significant effects that may result from construction of the Fresno to Bakersfield Section. The EIR/EIS does not defer development of specific mitigation measures to address impacts. In addition to the enforceable Project Design Features identified to avoid and minimize adverse impacts, the EIR/EIS provides an extensive set of enforceable mitigation measures to address impacts. In those cases, such as biological or agricultural land impacts, where the specific site for implementing a mitigation measures is not yet identified, the mitigation measures provide specific performance standards to be achieved. Performance standards establish specific measurable parameters that must be achieved by a mitigation measure. Under CEQA, where development of specific mitigation will rely upon information not yet available, an EIR may take a phased approach to the development of specific mitigation, provided that it has analyzed the impact and made a significance determination, commits to mitigation in the form of a mitigation measure for the significant effect, and specifies "performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way" (14 CCR 15126.4(a)(1)(b)). The same is true under NEPA. The EIS must discuss mitigation "in sufficient detail to ensure that environmental consequences have been fairly evaluated," but it is not necessary to formulate and adopt a complete mitigation plan (<i>Robertson v. Methow Valley Citizens Council</i>, 490 U.S. 332, 352 [1989]). The mitigation measures identified in the EIR/EIS meet these requirements.</p> <p>Consistent with the Authority's and FRA's practice for the Merced to Fresno Section EIR/EIS, it is anticipated that the lead agencies will adopt the mitigation measures identified in this EIR/EIS in conjunction with their decisions about the Fresno to Bakersfield Section as well as a monitoring plan. If the Authority and FRA approved the Fresno to Bakersfield section, the design/build contractor will reach a level of final design and, in conjunction with necessary permit requirements, the Authority will work closely with regulatory agencies and partner agencies to identify specific mitigation sites and how adopted mitigation measures with specific performance standards will be achieved. Specifically, the Authority will pursue necessary permits and approvals from other agencies, such as the U.S. Army Corps of Engineers (USACE) (Section 404 water quality permit) and California Department of Fish and Wildlife (CDFW) (Section 1600 et seq. streambed alteration agreement and Section 2081 incidental take permit), as described in Chapters 1 and 2 of the EIR/EIS. These permitting processes, including requirements for a compensatory mitigation plan as a prerequisite to issuance of the Section 404 permit, ensure the enforceability and success of the mitigation measures with performance standards.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
<p>The Authority received many comments expressing very strong views about the range of alternatives evaluated in the EIR/EIS. Numerous comments expressed the opinion that the EIR/EIS should evaluate additional alignment alternatives, particularly alignment alternatives within the the I-5 and SR 99 freeway/highway corridors, that had been previously considered and dismissed from further evaluation. Other comments expressed the opinion that the No Project Alternative or BNSF alternative should be selected. Many comments objected to alternatives that diverged from or extended outside existing road or train rights-of-way.</p>	<p><i>Alternatives Analysis Process Requirements under CEQA, NEPA, and Clean Water Act Section 404</i></p> <p>As described in Section 2.3.1 of the EIR/EIS, an EIR/EIS is required to analyze the potential impacts of a range of reasonable alternatives (14 CCR 15126.6, 40 CFR 1502.14(a)). Under CEQA, an EIR must describe a range of reasonable alternatives to the project, or to the location of the project, that could feasible accomplish most of the project's basic objectives, and avoid or substantially lessen any of the project's significant adverse effects, and evaluate the comparative merits of the alternatives (14 CCR 15126.6(a), (c)). The EIR must also evaluate a no project alternative (14 CCR 15126.6(e)). In determining the range of reasonable alternatives to be examined in the EIR, the lead agency must describe its reasons for excluding other potential alternatives. Under the "rule of reason," an EIR is required to study a sufficient range of alternatives to permit a reasoned choice (14 CCR 15126.6(f)). There is no requirement to study all possible alternatives.</p> <p>Under NEPA, the alternatives analysis "is the heart of the environmental impact statement" (40 CFR 1502.14). Accordingly, the EIR/EIS examines the range of reasonable alternatives to the proposed action, including the alternative taking no action. Pursuant to Section 14(l) of the FRA's Procedures for Considering Environmental Impacts, these include "all reasonable alternative courses of action which could satisfy the [project's] purpose and need" (64 FR 28546, May 26, 1999).</p> <p>An EIS prepared for NEPA must rigorously explore and objectively evaluate a reasonable range of alternatives along with the proposed action. Reasonable alternatives are those that may be feasibly carried out based on technical, economic, environmental, and other factors (40 CFR 1502.14). The general rule under NEPA is that all alternatives carried forward in an EIS must be analyzed and discussed to the same level of detail. This is different from CEQA, which requires only enough information about the alternatives to allow for meaningful comparison. For the Fresno to Bakersfield EIR/EIS, the more rigorous NEPA approach to alternatives evaluation was used rather than the CEQA approach. Nothing in CEQA law prohibits a lead agency from analyzing all alternatives with equal detail.</p> <p>The Fresno to Bakersfield Section will require a permit from the USACE under Section 404 of the Clean Water Act to discharge dredged or fill material into waters of the United States Section 404(b)(1) guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative which would have less adverse effects. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. An alternative would have less adverse effects if it impacted fewer acres of aquatic resources, had fewer impacts to special status habitats including aquatic habitats and habitats for threatened and endangered species, had fewer other environmental impacts such as impacts to properties protected under Section 4(f) of the Department of Transportation Act or impacts related to transportation, noise, vibration, farmland, cultural resources, and visual resources, and had fewer impacts on public interest factors such as residential and commercial displacements, community division, and public safety.</p> <p>In the section 404 permitting process, the USACE can only issue a permit for the least environmentally damaging practicable alternative (LEPDA) based on the evaluation of alternatives in accordance with Section 404(b)(1) guidelines. To insure that the preferred alternative identified by the Authority and FRA in the Final EIR/EIS would also qualify as the likely LEDPA, the FRA and Authority entered into a Memorandum of Understanding (MOU) with the USACE and EPA to coordinate the NEPA and</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>section 404 processes.</p> <p><i>2005 Decisions As Foundation for Range of Alternatives in Project-Level EIR/EIS</i></p> <p>As discussed in Chapter 2 and in Standard Response 1, the Authority's and FRA's decisions at the conclusion of the 2005 Statewide Program EIR/EIS process provided the foundation for the project-level EIR/EIS. In resolution # HSRA 05-11 and the Authority's 2005 CEQA Findings, the Authority selected the BNSF corridor alignment between Fresno and Bakersfield the downtown Fresno and downtown Bakersfield stations for further study in a project-level EIR. The FRA made the same decision in its 2005 Record of Decision and identified the BNSF corridor alignment for further study in a project-level EIS. Both the Authority and FRA expressly decided to pursue further study of an alignment option to serve a potential Visalia station.</p> <p>The 2005 Program EIR/EIS and the project decisions acknowledged that implementing the high-speed train project would have significant environmental impacts no matter where the infrastructure was located, but the agencies' decisions in 2005 reflected that, on balance, the BNSF corridor provided the best alternative between Fresno and Bakersfield for minimizing environmental impacts while also best meeting the project's purpose, need, and objectives.</p> <p><i>Alternatives Development for Project-Level Draft EIR/EIS and Reasons for Eliminating Through-Hanford Alternative</i></p> <p>Informed by the Program-level EIR/EISs, public and agency comments received as part of the CEQA and NEPA scoping process, and input received during ongoing interagency coordination meetings and public outreach, the Authority and the FRA conducted a preliminary alternatives analysis process for the Fresno to Bakersfield Section to identify the reasonable range of alternatives to carry forward and study in detail in the project-level EIR/EIS. As discussed in Section 2.3 of the EIR/EIS, analysts developed alignment plans, preliminary profile concepts, and cross section for the initial group of potential alternatives focused around the BNSF rail corridor and then conducted an initial assessment of the potential alternatives considering both qualitative and quantitative measures that addressed applicable policy and technical considerations. Through this process, the Authority and FRA in coordination with the USACE and EPA identified the alternatives that would be likely to best meet the project purpose and need and objectives, would be potentially practicable, and that would avoid or reduce environmental impacts relative to other alternatives. The result was a range of alternatives with varying levels of impacts so that, in comparison, each offered lesser environmental impacts in some area of concern. As a result of this analysis process, a preliminary reasonable range of alternatives was identified for analysis in the Fresno to Bakersfield Section Draft EIR/EIS. The alternatives analysis was reviewed by the Authority Board at a noticed public meeting in July 2010, prior to completion of the Preliminary Alternatives Analysis (AA) Report (Authority and FRA 2010). The Preliminary AA Report took into consideration public comments submitted on the initial recommendations concerning the alternatives for study in the EIR/EIS.</p> <p>A Supplemental Alternatives Analysis (AA) Report in September 2010 provided further consideration of options to minimize impacts on agricultural land and the rural areas of Kings County with a through-Hanford alternative. The Supplemental AA report examined two alignment options (named Options H-1 and H-2) that would have essentially followed the BNSF corridor through the city of Hanford, rather than bypassing the city to the east. Note that the route of "Alternative C-1" described in the 2010 Supplemental AA report is very similar to, but not identical to the BNSF Alternative analyzed in the Draft EIR/EIS and</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>Revised DEIR/Supplemental DEIS. Neither the "through-town downtown station" (H-1) nor "through-town southern station" (H-2) option was carried forward for further analysis in the Draft EIR/EIS because of the increased level of environmental impacts caused by these alternatives. The alternatives through the city of Hanford reduced the conversion of important farmland from 730 acres down to 382 acres but result in substantial urban impacts. Those impacts include the displacement of an additional 27 to 37 residential parcels, 14 to 21 commercial parcels, 21 to 23 industrial parcels, 20 to 24 public parcels, 2 churches, and 2 public parks. The alternatives would displace many residences near the BNSF Railway between W. Grangeville Boulevard and W. Elm Street in Hanford, and displace many of the businesses in downtown Hanford between 11th Avenue and the BNSF Railway south to SR 198. The alternatives through the city of Hanford would also go through the center of the community of Laton in Fresno County. The alternatives through Hanford would increase the number of residential parcels exposed to noise from an HST by over 1,000 and the HST would be visible from more than 2,000 residential parcels relative to Alternative C-1.</p> <p>Based on the extensive alternatives development process, the Authority and FRA issued a Draft EIR/EIS in 2011 with a thorough consideration of the alternatives shown in Exhibit GENERAL-02.1.</p> <p><i>Additional Alternatives Development for Revised Draft EIR/Supplemental Draft EIS and Reasons for Reintroducing West of Hanford Alternative</i></p> <p>As discussed in Chapter 2, the 2005 Statewide Program EIR/EIS identified a preferred alternative between Fresno and Bakersfield that bypassed the city of Hanford to the west. As stated in Chapter 6A of the 2005 Program EIR/EIS, the preferred alignment included no potential station between Fresno and Bakersfield, but indicated that the Authority and FRA would undertake an additional study of an alignment option between Fresno and Bakersfield, or variations thereof, to serve a potential Visalia state prior to commencing the project-level EIR/EIS process. Prior to initiating the preparation of the project-level EIR/EIS for the Fresno to Bakersfield Section, the Authority and FRA completed the <i>Visalia-Tulare-Hanford Station Feasibility Study</i> (Authority and FRA 2007) that analyzed potential station locations in the Hanford, Visalia, and Tulare area. That study determined that a station immediately east of Hanford would capture the largest current and projected population in the Hanford/Visalia/Tulare area. As discussed in Section 2.3.2 of the EIR/EIS, the study identified several alternative alignments that were carried through the alternatives analysis process.</p> <p>The screening-level environmental analysis conducted for the Preliminary AA Report found that the Hanford East Bypass (BNSF Alternative) would cause fewer environmental impacts than the Hanford West Bypass Alternative. As described in a letter from the Authority to the USACE on April 21, 2011, both the Hanford East Bypass and Hanford West Bypass alternatives would have approximately the same number of residential, commercial, and industrial displacements and urban impacts (e.g., noise and aesthetics). The Hanford West Alternative would impact 2 acres of seasonal wetlands, waters of the U.S., and riparian habitat. This alternative would also impact 4.7 acres of canals, ditches, and retention/detention basins. The Hanford East Alternative would impact no seasonal wetlands, about 0.9 acre of waters of the U.S. and riparian habitat, and about 2.8 acres of canals, ditches, and retention/detention basins. The Hanford West alternative would impact 5 acres more of habitat for threatened or endangered plants and 210 acres more of habitat for threatened or endangered animals than the Hanford</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	 <p>PRELIMINARY DRAFT/SUBJECT TO CHANGE - HST ALIGNMENT IS NOT DETERMINED Source: URS, 2011</p> <p>June 30, 2011</p> <p>Figure 2-21 HST alternatives and HMF sites carried forward for further study</p> <p>Exhibit GENERAL-02.1: HST Alternatives and HMF sites carried forward for further study in the Draft EIR/EIS</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>East alternative. Finally, the Hanford West alternative would impact 47 acres more important farmland, including 32 acres of prime farmland, than the Hanford East alternative.</p> <p>Because a Hanford East Bypass provided the best station location for the Hanford/Visalia/Tulare area, and would cause fewer environmental impacts than the Hanford West Bypass Alternative, the Hanford West Bypass was not carried forward in the 2011 Draft EIR/EIS. Based on comments received from stakeholders, agencies, and the public on the Draft EIR/EIS, however, the Authority and FRA reconsidered a Hanford West Bypass with a station location to serve the Kings/Tulare region. Another supplemental alternatives analysis was conducted in 2011 to identify the most viable alignment and station location west of Hanford that both minimized environmental impacts and provided a feasible and cost-effective option for the Authority (Authority and FRA 2011). This new Hanford West Bypass Alternative was carried forward for analysis in the Revised DEIR/Supplemental DEIS, thereby providing two distinct alignment and station options in the Hanford area.</p> <p>The end result of the AA process, including consideration of the Program-Level EIR/EIS, the Preliminary AA Report, and the two Supplemental AA Reports, was the identification of the range of alternatives described in Chapter 2 of the EIR/EIS. The EIR/EIS also includes a description of the alternatives initially considered and dismissed, including a brief discussion of the reason for dismissing them as required by NEPA (40 CFR 1502.14).</p> <p>Section 2.3.1 of the EIR/ EIS discusses the project-level alternatives development process. Section 2.3.2 explains the range of potential alternatives preliminarily considered, but eliminated from detailed consideration. The September 2010 Supplemental AA Report and December 2011 Supplemental AA Report prepared by the Authority and FRA describe the alternatives identification process in more detail (Authority and FRA 2010b and 2011, respectively). Both remain available for the public to review on the Authority's website. Documentation of the coordination with the USACE and EPA to integrate the NEPA and 404 processes is also provided on the Authority's website.</p> <p><i>Rationale for Not Studying an I-5 Alignment in Fresno to Bakersfield Project-Level EIR/EIS</i></p> <p>Numerous comments suggested the high-speed train should follow the I-5 corridor, and that the EIR/EIS did not consider a reasonable range of alternatives as required by NEPA and CEQA because it did not include an I-5 alignment. Some comments suggested concerns about lack of population on the I-5 corridor could be addressed by a trunk and branch configuration.</p> <p><i>Basis for Not Studying an I-5 Corridor Alignment in Statewide Program EIR/EIS:</i> An I-5 corridor alignment was preliminarily considered and eliminated from further study at the program level, as documented in the Statewide Program EIR/EIS. The I-5 corridor was determined to have a number of shortcomings:</p> <ul style="list-style-type: none"> • The I-5 corridor had notably lower ridership projections than the SR-99 corridor. • The I-5 corridor would not be compatible with then-current land use planning in the San Joaquin Valley that accommodated growth in communities along the SR-99 corridor.

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<ul style="list-style-type: none"> • Early studies had found the I-5 corridor to have a higher potential for impacts on the natural environment, whereas the SR-99 corridor had a higher potential for social/cultural impacts. • The I-5 corridor would not provide transit and airport connections in this area and thus failed to meet the project purpose and need and basic objective of the project to maximize intermodal transportation opportunities and improve intercity travel in the Central Valley. <p>The I-5 corridor did not meet the project purpose and need sufficiently to be a reasonable alternative at the Program level. This conclusion is discussed in the 2005 Program EIR/EIS section 2.6.8 and Appendix 2-H, and is summarized in this Fresno to Bakersfield EIR/EIS at Section 2.3.2.</p> <p>The Statewide Program EIR/EIS alternatives screening was based in part on the Authority's re-review of extensive previous planning and feasibility studies conducted by Caltrans, and the California Intercity High Speed Rail Commission in the mid-1990's. These include: the Los Angeles-Bakersfield Preliminary Engineering Feasibility Study Final Report (Caltrans 1994); the Independent Ridership and Passenger Revenue Projections for High Speed Rail Projects in California, (Charles River Associates, July 1996); the Corridor Evaluation and Environmental Constraints Analysis (Intercity High Speed Rail Commission 1996). The Authority also prepared its own California High Speed Rail Corridor Evaluation Final Report in 1999 (Authority 1999). These early studies were summarized and explained in section 2.3.1 of the 2005 Statewide Final Program EIR/EIS. Of the three, the 1996 Corridor Evaluation and Environmental Constraints Analysis was most pertinent to consideration of the I-5 corridor between Sacramento and Bakersfield.</p> <p>The 1996 Corridor Evaluation and Environmental Constraints Analysis presents the initial screening of alternative corridors for an HST system between the San Francisco Bay Area and Los Angeles. This screening was done in two phases. In the first phase, evaluation criteria defined by the goals of maximizing ridership, minimizing costs, and avoiding potential environmental constraints, identified three feasible corridors: the Coastal; I-5; and Central Valley (SR 99) corridors. The Coastal corridor was not carried forward in the second phase of screening because of low projected ridership and high capital costs. The Coastal corridor's ridership projections were 24% to 46% lower than the shortest I-5 corridor, which had the highest ridership projections of all the corridors. The capital cost for the Coastal corridor was 24% higher than the shortest I-5 corridor, which was the lowest cost corridor considered in this study.</p> <p>In the second phase of screening, the I-5 and Central Valley corridors were better defined with greater numbers of segment possibilities and station locations. The engineering analysis evaluated segments in greater detail with regard to conceptual plan and profile drawings, capital costs, and operations and maintenance costs. The environmental analysis identified potential impacts and constraints along the more defined corridors in four categories:</p> <ul style="list-style-type: none"> • Natural environment impacts • Social/cultural resource impacts • Land use impacts

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<ul style="list-style-type: none"> Engineering/environmental constraints <p>The 1996 corridor planning studies found that the I-5 corridor was very effective in serving the end-to-end markets of San Francisco and Los Angeles. This corridor offers the shortest distances, lowest capital costs, fastest Los Angeles to San Francisco Bay Area travel times, and the highest overall ridership forecasts. However, the I-5 corridor would be the least attractive corridor for serving intermediate markets because future stations would be distant from the major urban population centers of the San Joaquin Valley. The I-5 corridor has very little existing or projected population between the San Francisco Bay Area and Los Angeles (California Intercity High Speed Rail Commission 1996). In contrast, well over 3 million residents were projected to live between Fresno and Bakersfield along the Central Valley corridor by 2015, which directly serves all the major Central Valley cities. Residents along the Central Valley corridor lack a competitive transportation alternative to the automobile, and a ridership analysis showed that they would be ideal candidates to use an HST System.</p> <p><i>Basis For Not Studying I-5 Corridor at Program Level is Equally Compelling Now</i></p> <p>The facts and rationale for why the I-5 corridor was determined not to be a reasonable alternative during the Statewide Program EIR/EIS process are equally compelling now.</p> <p><u>Failure to meet project purpose and need/project objectives:</u> The purpose of the statewide HST System is to provide a reliable high-speed electrified train system that links the major metropolitan areas of the state, and that delivers predictable and consistent travel times. A further objective is to provide an interface with commercial airports, mass transit and the highway network and relieve capacity constraints of the existing transportation system as increases in intercity travel demand in California occur, in a manner sensitive to and protective of California's unique natural resources (Authority and FRA 2005). As described in Chapter 1, the purpose of the Fresno to Bakersfield Project is to implement the Fresno to Bakersfield Section of the California HST System to provide the public with electric-powered high-speed rail service that provides predictable and consistent travel times between major urban centers and connectivity to airports, mass transit, and the highway network in the south San Joaquin Valley, and connect the northern and southern portions of the system.</p> <p>A key consideration in not studying an I-5 corridor alignment in the Statewide Program EIR/EIS is the fact that I-5 corridor would not serve many major metropolitan areas of the state or provide intermodal transportation connectivity. The same is true today. The I-5 corridor bypasses the major population centers of the San Joaquin Valley. It is approximately 50 miles west of Fresno (2010 population, city: 494,665) and 20 miles west of Bakersfield (2010 population, city and adjoining unincorporated Greenacres and Oildale: 385,633). Beyond the Fresno to Bakersfield section, the I-5 corridor alternative would also preclude efficient rail service to Merced (2010 population, city: 78,958) and Hanford (2010 population, city: 53,967). The necessity for passengers, most of whom live along the SR-99 corridor, to travel from population centers to the I-5 corridor in order to access the HST would reduce the system's reliability by increasing the amount of time and distance from home to station in comparison to an alignment close to major Central Valley population centers. Increasing this time and distance also increases riders' uncertainty over reaching the scheduled HST on time, as well as making their overall trip longer from end to end. As a result of bypassing the population centers of the San Joaquin Valley, the I-5 corridor fails to meet the HST purpose of providing a reliable mode of travel linking the major metropolitan areas of the state.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p><u>Lack of Compatibility with Land Use Planning:</u> Another consideration in not studying an I-5 corridor alignment in the Statewide Program EIR/EIS is the fact that such an alignment would not be compatible with future growth patterns in the Valley. The same is true today. Land use planning in the San Joaquin Land continues to focus urban growth in the Central Valley cities around the SR-99 corridor, rather than along I-5, consistent with conditions noted in the Statewide Program EIR/EIS. There is virtually no development envisioned along the majority of the I-5 corridor. As set forth in the San Joaquin Valley Blueprint, land use planning in the valley focuses and accommodates growth in the communities along the SR 99 corridor (Council of Fresno County Governments 2009). For the shortest I-5 route option, Kern County would be served by a station about 20 miles from downtown Bakersfield, whereas a Fresno County station would be about 46 miles from downtown Fresno. This does not provide the urban centers of the south San Joaquin Valley a reasonable transportation alternative, which is an objective of both Proposition 1A and the project's purpose.</p> <p>To provide maximum opportunity for ridership and station area development in accordance with the purpose, need, and objectives for the HST System, the preferred HST station locations would be multi-modal transportation hubs and would typically be in traditional city centers. The Authority's station area development principles draw on transit-oriented development (TOD) strategies to focus compact growth within walking distance of rail stations and other transportation facilities (Murphy et al. 2004). Applying TOD measures around HST stations is a strategy that has worked for large, dense urban areas, as well as smaller central cities and suburban areas.</p> <p>The ease of accessing HST stations for passengers and other users is critical to the success of the HST project. This includes providing the most efficient travel experience possible - both in absolute terms and in relation to the customers' perceptions - especially to make HST travel competitive with other travel modes. Locating the stations on the I-5 freeway would require some type of connecting service, thereby requiring more passengers to make this extra connection to get to their final destination and increasing their travel times. This additional imposition can result in train travel being more inconvenient and less attractive for passengers. Placing stations in existing downtowns and population centers essentially puts travelers at a city's doorstep and would likely reduce the travel time needed to get to the travelers' final destination. In addition, the location of stations along I-5 would promote unplanned growth which is against the goals and objectives of the San Joaquin Valley Blueprint and the general plans of valley counties (e.g., Fresno County General Plan Land Use and Agriculture Element, Policy LU-A.1; County of Kings 2035 General Plan Land Use Element; and Kern County General Plan Land Use, Open Space, and Conservation Element policies 5 and 49), the opposite of what the HST System is intended to achieve, and is opposed by numerous agencies, including the U.S. Environmental Protection Agency (EPA).</p> <p><u>Spur System Would Have Increased Impacts, Low Ridership, Operational Constraints, and Higher Cost:</u> Some commenters have suggested an alternative combining an I-5 corridor HST route with spur lines to Fresno, Bakersfield, and other San Joaquin Valley cities. The 2005 Program EIR/EIS explained that this option was rejected from consideration because it would add considerable additional capital costs from the additional track miles, would result in less ridership than the SR-99 corridor, and would have operation constraints. The same concerns continue to be true now. An I-5 spur system alternative would suffer from the same inconsistencies with the project purpose and objectives as the I-5 corridor. Further, it would have its own impacts on waters of the United States, waters of the state, special status species, and agricultural land. This is easily</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>demonstrated by a gross estimate of the additional right of way necessary for spur connections from stations on I-5 to the cities of Fresno, Hanford, and Bakersfield.</p> <p>The following are based on an estimated 75-foot additional right-of-way width (assuming this would be a double-track surface line with minimal elevated sections) because none of these roads currently have sufficient right of way to support a rail line. Because the spurs would be generally located within the same habitat types as the project, they would have similar impacts on special status species, scaled to the amount of habitat and number of movement corridors affected.</p> <ul style="list-style-type: none"> • The distance from the Fresno Amtrak station to I-5 along SR-180 and West Panoche Road is approximately 52.5 miles. A spur line would require at least 477 acres of land, potentially more in order to provide a smooth transition from SR-180 to West Panoche Road. Substantial portions of this line would cross agricultural lands outside the urbanized areas of Fresno and Kerman. This would also affect a substantial number of businesses and residences that adjoin SR-180 within Fresno and Kerman. West of Kerman, the route would also require a new crossing at Fresno Slough, potentially affecting wetlands. • The distance from the Hanford Amtrak station to I-5 along SR-198 is approximately 34 miles. A spur line would occupy approximately 309 acres of land. Most of the land along SR-198 outside of the Hanford/Armona and Lemoore urban areas is in agricultural use. East of Lemoore Naval Air Station, the route would cross possible wetlands. • The distance from the Bakersfield Amtrak station to I-5 along SR-58 (assuming that an acceptable route could be found through Rosedale) is approximately 24 miles. An additional 215 acres of right of way would be necessary; probably more if a curved transition is made to connect the off-set northern and southern alignments of SR-58 west of Enos Lane. This alignment would affect a substantial number of businesses and rural residences that adjoin SR-58 within Bakersfield and the unincorporated communities of Rosedale and Green Acres. It would also cross agricultural areas. <p>In addition, acquisition of right of way, construction, and operation of connecting trains on approximately 110 miles of spur tracks would add substantially to the construction and operational costs of the system. In other words, the rationale for rejecting study of an I-5 corridor spur system applies equally now as it did previously.</p> <p>In summary, the I-5 corridor could possibly provide better end-to-end travel times compared to the Central Valley corridor, but the I-5 corridor would not meet project objectives and would not satisfy the project's purpose and need. First, because it is not where the bulk of the Central Valley population resides, the I-5 corridor would result in lower ridership and would not meet the current and future intercity travel demand generated by the Central Valley communities as well as the Central Valley corridor. Second, the I-5 corridor would not provide transit and airport connections in this area, and thus would not meet the purpose and need and basic objectives of maximizing intermodal transportation opportunities and improving the intercity travel experience in the Central Valley area as well as the Central Valley corridor. Third, use of the I-5 corridor would encourage sprawl development, which is against the intended purpose of the HST System, and which was opposed by numerous agencies, including the EPA. Finally, the I-5 corridor would have greater environmental impacts than the Central Valley corridor. For these reasons, the I-5 corridor was not carried forward in the environmental analysis in the Statewide</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>Program EIR/EIS for the California HST System and it is not a reasonable alternative that merits study at the project-level in the Fresno to Bakersfield section EIR/EIS.</p> <p><i>Rationale for Not Studying an SR 99/UPRR Corridor Alternative</i></p> <p>The SR 99/UPRR corridor between Sacramento and Bakersfield was evaluated in the Statewide Program EIR/EIS along with the BNSF corridor. The SR 99/UPRR corridor was not selected as the preferred corridor for the Fresno to Bakersfield Section. Prior to initiating the preparation of the project-level EIR/EIS for the Fresno to Bakersfield Section, the Authority investigated potential alignments for a station location in the Hanford, Visalia, and Tulare area (Authority and FRA 2007). Since Visalia and Tulare are located along the SR 99/UPRR corridor, most of the potential alternatives were partially or largely located in the SR 99/UPRR corridor. Therefore, alternative alignments within the SR 99/UPRR corridor were re-evaluated for the Fresno to Bakersfield Section. That analysis is provided in the <i>Checkpoint B Summary Report</i> (Authority and FRA 2011) prepared for the project and is available on the Authority website.</p> <p>As described in the <i>Checkpoint B Summary Report</i>, environmental impacts of an alignment in the SR 99/UPRR corridor would be somewhat similar to the BNSF Alternative. However, an SR 99/UPRR alignment was determined not to be feasible or practicable (as described below) and therefore was not carried forward for detailed analysis in the Fresno to Bakersfield EIR/EIS. The HST alignment in the SR 99/UPRR corridor presents a number of significant logistical conflicts involving existing infrastructure that makes the alternative not feasible or practicable. These conflicts are unique to this alignment, and many of them are interrelated, especially those involving UPRR tracks. HST design and construction to resolve these conflicts would inhibit or even foreclose nearby desired public and private investment and development.</p> <p>As early as 1862, when Congress passed the Pacific Railway Act, which authorized and subsidized construction of the first transcontinental railroad, railroads have been viewed as essential infrastructure for commerce and a healthy national economy. Today, more than 650 freight railroads in the United States have "common carrier" status, including the four market-dominating Class 1 companies: CSX, Norfolk Southern, BNSF Railway, and UPRR. "Common carrier" status was established by the Interstate Commerce Act of 1887 (ICA), and it grants "common carrier" railroads certain rights and protections; in return, "common carriers" are obliged to serve the public without discrimination. The ICA also created the Interstate Commerce Commission (ICC) to regulate the railroads. The ICC was replaced by the Surface Transportation Board in 1996.</p> <p>Access to railroad property by state and local governments can be achieved either by negotiated agreement or condemnation (eminent domain). In practice, very few condemnation actions have been taken, and even fewer have succeeded. Virtually all access to railroad property (whether through easement or in fee) has been obtained through negotiated agreements. This is largely due to the fact that under the ICA and successor laws, and based on than 100 years of case law, railroads have established a very high level of property protection. In condemnation proceedings, a clear and compelling public purpose-one that does not adversely affect the public mission of the railroads-must be demonstrated in order to prevail.</p> <p>Freight railroads are chiefly concerned with two issues relating to proposed construction within or near their right-of-way: (1) public safety and their potential liability for damages, whether or not the result of their actions (liability risk); and (2)</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>maintenance of their access to existing and potential new customers (commercial risk). Other concerns frequently expressed include the continuation of railroad operations during construction, and the protection of their facilities from additional wear and tear caused by construction activity or permanent changes in soil conditions, drainage, etc.</p> <p>In the case of the HST project, the UPRR has expressed its concerns in writing on several occasions regarding both liability risk and commercial risk. It believes that construction of project facilities within its right-of-way would expose it to a significant and unmanageable increase in financial risk due to the creation of new hazards. It also maintains that the project would result in both displacement of existing customers, and a "walling off" of miles of its right-of-way to potential future customers. Based on these concerns, active opposition by the UPRR would result in (1) adverse impact on project schedule (delay); and (2) adverse impact on project cost. These impacts are addressed in more detail below.</p> <p>UPRR's stated opposition to construction within its right-of-way would result in unwillingness to negotiate terms under which such construction could take place. This position would require the Authority to initiate a condemnation action in state court. The outcome of this kind of proceeding, including very recent experience in Sacramento, suggests that such an action would be met with a successful petition to have jurisdiction moved to federal court. The UPRR likely would raise the safety issue in its defense and seek an injunction from the court to stop work on this section of the project until the matter was resolved. These actions would also bring in the involvement of the California Public Utilities Commission and, potentially, the FRA in its safety regulatory role.</p> <p>The Authority could respond by (1) continuing to pursue the matter in the courts until resolution; or (2) preparing alternative designs that allow the HST facility to cross over UPRR right-of-way, where necessary, employing unusually difficult and expensive construction ("straddle bents" in excess of 150 feet in width and more than 1,700 feet in length). Under the first option, the Authority would incur unknown and unmanageable schedule risk due to the time required for litigation (such litigation could take 2 years or more to resolve); and cost escalation risk due to delay and potential mitigation imposed by the courts. Further, and most importantly, the Authority would have project completion risk, because there would be no guarantee of success in court.</p> <p>UPRR's stated opposition to construction adjacent to its right-of-way could result in its filing a civil action in state court claiming damages relating to loss of revenue from current and future customers. In this case, jurisdiction would most likely remain in state court, and the likelihood of obtaining injunctive relief during litigation would be low. However, the Authority would still have unknown cost risk associated with a potential finding in favor of the railroad, which could translate into uncertainty regarding the project's overall funding plan and schedule.</p> <p>It may be possible to construct and operate HST facilities adjacent to UPRR tracks in some areas; however, pursuing the design and construction of the UPRR alignment alternative poses serious threats to the success of the HST Project in the Fresno to Bakersfield Section. The legal aspects of this issue represent a major logistical impediment that the Authority wishes to avoid, because they could add years to the project schedule, escalate costs, and threaten the completion of a viable high-speed train system throughout the state.</p> <p>Highways and Local Roads. The SR 99/UPRR alignment alternative would require the reconstruction of four interchanges</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>along SR 99 and the interchange at SR 99 and SR 198. These interchanges are currently constrained by UPRR. Due to the existing constraints on the roadway and interchange configurations, a new design would require exceptions to the Caltrans design standards. These design exceptions would decrease the safety of the driving public by exposing them to features below the current state highway design standards.</p> <p>Additionally, the UPRR alignment alternative would be on a viaduct structure passing over SR 99 five times between Fresno and Bakersfield, and also over SR 137 in Tulare. Although columns could be placed to avoid existing infrastructure, HST tracks in the UPRR corridor would forever constrain improvements along one of the state's most vital roadways and preclude the long-range vision of SR 99 being upgraded to an interstate highway.</p> <p>The SR 99 and SR 198 interchange in Visalia represents a significant constraint to the HST alignment to stay within the existing transportation corridor. Because the existing junction is located adjacent to the Visalia Municipal Airport, the HST alignment would have to be placed in a trench in order to avoid raising the existing bridges in the interchange. Any increase in elevation of transportation infrastructure is unacceptable, because it would interfere with the Precision Instrument Approach Surface of the airport. Maintaining an alignment along this corridor, outside of the airport constraints, would impact SR 198 and necessitate the reconstruction of the freeway-to-freeway interchange. SR 198 would cross over the HST tracks along the existing horizontal alignment.</p> <p>Airport Runway Protection Zones. Four airports occur in the vicinity of the SR 99/UPRR alignment: Visalia Municipal (Visalia), Mefford Field (Tulare), Delano Municipal (Delano), and Minter Field (Shafter). These airports were developed subsequent to the UPRR; therefore, the railroad does not encroach on their Precision Instrument Approach Surfaces, as defined in the Caltrans Highway Design Manual Index 207 (Caltrans 2006). However, these airports constrain the HST alignment and the necessary relocations of other facilities impacted by the HST.</p> <p>In order to stay within the transportation corridor near the Visalia Municipal Airport, the HST project, as noted above, would need to be constructed in a trench to avoid encroaching on the Airport's Precision Instrument Approach Surface (Authority and FRA 2011). Given geometric constraints, and in an effort to not place SR 99 between rail facilities, the UPRR tracks would need to be relocated for a length of 5 miles between Visalia and Tulare. This would allow the HST to be located between SR 99 and the UPRR tracks. Without UPRR's cooperation, this would not be feasible.</p> <p>Relocation of the UPRR tracks in this 5-mile-long segment would result in significant infrastructure impacts. All of the existing rail spurs would need to be reconstructed along with all of the rail infrastructure and a substantial number of state and local road facilities. The resulting larger project footprint would increase the loss of agricultural lands and result in adverse impacts to the local businesses.</p> <p>The only available alternative to avoid the airport and the relocation of UPRR would involve aligning the HST tracks approximately 1 mile to the west of the existing SR 99 transportation corridor between Goshen and Tulare, a distance of some 13 miles. This would increase impacts to resources such as agricultural lands and dairies.</p>

Comment Summary	Response																																	
GENERAL	FB-Response-GENERAL-02: Alternatives																																	
	<p>Industrial Facilities. The SR 99/UPRR alignment impacts numerous industrial facilities between Fresno and Bakersfield. The alignment would avoid direct impacts to some facilities; however, there may be indirect impacts to the facilities, including limiting expansion, preventing future connections with UPRR, or altering the local roadway network so as to make the facilities' locations no longer desirable to suppliers or customers. Table 1 indicates some of the facilities affected.</p> <p style="text-align: center;">Table 1 Industrial Facilities Impacted by UPRR Corridor Alignment</p> <table><tr><th>Company</th><th>Location</th><th>Industry</th></tr><tr><td>JD Heiskell & Co</td><td>Tulare</td><td>Grain Processing</td></tr><tr><td>Kraft Foods, Inc.</td><td>Tulare</td><td>Food</td></tr><tr><td>California Dairies</td><td>Tipton</td><td>Butter Plant</td></tr><tr><td>Calgren Renewable Fuels</td><td>Pixley</td><td>Ethanol Plant</td></tr><tr><td>JD Heiskell & Co</td><td>Pixley</td><td>Grain Processing</td></tr><tr><td>Crop Production Services</td><td>Delano</td><td>Fertilizer</td></tr><tr><td>Railex</td><td>Delano</td><td>Rail Shipping</td></tr><tr><td>Sears Logistics Services</td><td>Delano</td><td>Retail Distribution</td></tr><tr><td>AES Delano</td><td>Delano</td><td>Biomass Power Plant</td></tr><tr><td>APTCO</td><td>Delano</td><td>Expanded Polystyrene</td></tr></table> <p>Source: URS 2010</p> <p>For example in Delano, just south of the airport, a Railex distribution center is located adjacent to the UPRR tracks. Railex is a private, non-stop rail service that has two trains a week from Delano, California to Rotterdam, New York, primarily for the movement of agricultural goods across the country. Railex is recognized by the U.S. EPA as a SmartWay Transport Partner. As a rail transportation company, Railex has a spur connection to the UPRR. The UPRR alignment alternative crosses over the Railex spur on a viaduct to avoid severing the existing connection. However, the location of the HST within the SR 99/UPRR corridor would limit the ability of Railex to expand its storage track area, and therefore would hinder the future growth of this distribution center.</p> <p><i>Rationale for Not Studying a San Joaquin Valley Railroad Corridor</i></p> <p>Public comments on the RDEIR/SDEIS stated that an HST alignment paralleling the San Joaquin Valley Railroad (SJVR) on the east side of the San Joaquin Valley would have fewer impacts than the alternatives considered in the environmental document. An alignment on the east side of the San Joaquin Valley from Fresno to Bakersfield was not originally considered for the project in the preliminary alternatives analysis process because it would result in substantial out-of-direction travel, increasing the cost of the project and the travel time. However, in response to comments on the environmental document, an</p>	Company	Location	Industry	JD Heiskell & Co	Tulare	Grain Processing	Kraft Foods, Inc.	Tulare	Food	California Dairies	Tipton	Butter Plant	Calgren Renewable Fuels	Pixley	Ethanol Plant	JD Heiskell & Co	Pixley	Grain Processing	Crop Production Services	Delano	Fertilizer	Railex	Delano	Rail Shipping	Sears Logistics Services	Delano	Retail Distribution	AES Delano	Delano	Biomass Power Plant	APTCO	Delano	Expanded Polystyrene
Company	Location	Industry																																
JD Heiskell & Co	Tulare	Grain Processing																																
Kraft Foods, Inc.	Tulare	Food																																
California Dairies	Tipton	Butter Plant																																
Calgren Renewable Fuels	Pixley	Ethanol Plant																																
JD Heiskell & Co	Pixley	Grain Processing																																
Crop Production Services	Delano	Fertilizer																																
Railex	Delano	Rail Shipping																																
Sears Logistics Services	Delano	Retail Distribution																																
AES Delano	Delano	Biomass Power Plant																																
APTCO	Delano	Expanded Polystyrene																																

Comment Summary	Response															
GENERAL	FB-Response-GENERAL-02: Alternatives															
	<p>alignment that paralleled the SJVR from Fresno to Bakersfield was reconsidered.</p> <p>An SJVR Alternative would be the same as the BNSF Alternative in Fresno from the northern limits of the project south to E. Jensen Avenue. From that point, the SJVR Alternative would diverge to the southeast, following S. Railroad Avenue and S. Golden State Boulevard through Fresno to Malaga (Exhibit GENERAL-02.2). The alignment would cross over the UPRR between E. Central and E. American avenues and curve to the east, crossing the San Joaquin Valley for about 14 miles before paralleling the west side of the SJVR at Reedley. The SJVR Alternative would continue to parallel the SJVR through Reedley, Dinuba, Ivanhoe, Exeter, and Lindsay. At Avenue 224 south of Lindsay, the SJVR Alternative would diverge from the SJVR, bypassing Porterville to the west. South of Terra Bella, the alignment would parallel the west side of SR 65 south to Ducor where it would again pick up the SJVR south of Avenue 32. The alignment would parallel the west side of SJVR through Richgrove and then drop south at E. Lerdo Highway east of the Shafter Municipal Airport and join the BNSF Alternative south of Reina Road in Rosedale. This alignment would be approximately 11 miles longer than the BNSF Alternative and add about 3 minutes to the travel time between Fresno and Bakersfield.</p> <p>The SJVR Alternative was compared with the BNSF Alternative using the principal environmental screening parameters that were considered for the initial evaluation of potential alternatives for the Fresno to Bakersfield Section: farmland conversion, impacts to special aquatic sites which included rivers, lakes, ponds, and seasonal wetlands, residential displacements, and commercial/industrial displacements. Farmland conversions were estimated based on important farmland (i.e., prime farmland, farmland of statewide importance, farmland of local importance, and unique farmland) data maintained by the California Department of Conservation Farmland Mapping and Monitoring Program. Impacts to special aquatic sites were based primarily on two data sources: the National Wetlands Inventory (NWI) and the Holland Vernal Pool Inventory (Holland 2009). Displacements were determined from aerial photography of the alignments. For the screening analysis, it was assumed that the alignments would be 100 feet wide. The results of the analysis are provided in Table 2.</p> <p style="text-align: center;">Table 2 Screening Comparison of SJVR and BNSF Alternatives</p> <table><tr><th>Alternative</th><th>Farmland Conversion (acres)</th><th>Special Aquatic Sites (acres)</th><th>Residential Displacements</th><th>Commercial/Industrial Displacements</th></tr><tr><td>BNSF Alternative</td><td>940</td><td>32.7</td><td>232</td><td>257</td></tr><tr><td>SJVR Alternative</td><td>1,014</td><td>12.6</td><td>241</td><td>390</td></tr></table>	Alternative	Farmland Conversion (acres)	Special Aquatic Sites (acres)	Residential Displacements	Commercial/Industrial Displacements	BNSF Alternative	940	32.7	232	257	SJVR Alternative	1,014	12.6	241	390
Alternative	Farmland Conversion (acres)	Special Aquatic Sites (acres)	Residential Displacements	Commercial/Industrial Displacements												
BNSF Alternative	940	32.7	232	257												
SJVR Alternative	1,014	12.6	241	390												

[illegible]

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>Initial screening indicates that the SJVR Alternative would have greater impacts to farmlands and urban centers than the BNSF Alternative, and the SJVR Alternative would impact waters of the U.S. that have been much less modified by agricultural practices than waters more toward the center of the valley. Those waters include the Kings, Saint Johns, Kaweah, Tule, and White rivers and Deer and Poso creeks. The SJVR Alternative passes through a region of the San Joaquin Valley that is as intensely cultivated as the area crossed by the BNSF Alternative. Between Fresno and Bakersfield, the BNSF Alternative would cross through the communities of Corcoran, Wasco, and Shafter. The SJVR Alternative would cross through the communities of Reedley, Dinuba, Ivanhoe, Exeter, Lindsay, Shafter, and Richgrove, twice as many as the BNSF Alternative. Because the SJVR Alternative is substantially longer than the BNSF Alternative and crosses through more communities, the capital cost for constructing the HST on this alignment would be higher than the construction costs for the BNSF Alternative, possibly on the order of \$700 million. Because the SJVR Alternative would increase travel time by an estimated 3 minutes and project costs by as much as \$700 million, the alternative was judged not to be reasonable and practicable and is not considered further in this environmental analysis. In addition, the overall environmental impacts of the SJVR Alternative are equal to or greater than the BNSF Alternative; therefore, the SJVR Alternative is not environmentally superior to alternatives that have already been evaluated in the Fresno to Bakersfield EIR/EIS. For these reasons, this alternative is not a reasonable alternative that will meet the project's purpose and need and will therefore not be included in the Final Fresno to Bakersfield EIR/EIS.</p> <p><i>Rationale for Not Studying Alternatives That Would Exclusively Use Existing Transportation Corridors</i></p> <p>Some comments have suggested that the RDEIR/SDEIS should examine alternative routes that are located completely within existing transportation corridors, primarily the BNSF and UPRR/SR 99 corridors. These comments have suggested using existing tracks or upgrading Amtrak facilities to allow Amtrak to operate at higher speed.</p> <p>Unsuitability of Existing Tracks. Dedicated tracks (those only used by HSTs) are necessary to avoid scheduling conflicts and potential conflicts with slower-moving trains, as well as to ensure the proper maintenance of tracks for high-speed operation and to include curves engineered for high speeds. Because of proposed operating speeds and FRA's safety requirements, the proposed HST System in the Central Valley would be designed with fully grade-separated tracks that are dedicated for HST use. Grade separation is necessary to avoid accidents where tracks cross roads or other rail lines. Railroad crossing gates do not provide a sufficient level of exclusion (at upper speeds, an HST travels the length of a football field in less than 1 second).</p> <p>Existing railroad tracks in the project area are built to support freight and lower-speed passenger service. These services share the track in some locations, requiring passenger trains to wait for the passage of freight trains on a regular basis. Existing tracks are owned by UPRR and BNSF and cannot support 200 mph passenger rail service on those tracks. . The existing rail tracks are not grade-separated from all intersecting roads, with at-grade crossings being the normal configuration. Neither the existing tracks nor the roadbed were built to accommodate or meet minimum standards for high-speed rail operations. In addition to the safety and capacity constraints, portions of the existing rail rights-of-way are not sufficiently straight to accommodate the design speed of the HST, which would necessitate divergence to maintain sufficiently high speeds. For example, an operating speed of 220 mph requires that track curves have a minimum radius of 5 miles. Additionally, the 2005 Program EIR/EIS (Authority and FRA 2005) concluded that sharing track with a first priority of freight</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-02: Alternatives
	<p>service would be unacceptable for HSTs because it would prevent them from providing high-speed service and travel times. Finally, placing an overhead electrification system on existing railroad tracks would restrict the height of freight traffic (i.e. doublestacks) which would be unacceptable to the UPRR and BNSF. Use of existing track for the HST in the Fresno to Bakersfield Section was therefore not considered to be a reasonable alternative for study in this EIR/EIS.</p> <p>Limitations of Existing Corridors and Amtrak Upgrade. Proposition 1A includes a design characteristic that calls for the HST alignment to follow existing transportation or utility corridors to the maximum extent feasible, as determined by the Authority. However, due to HST engineering and operational needs, it cannot feasibly be built solely within the existing transportation corridors. Existing corridors are not sufficiently straight nor are their curve radii long enough to support high-speed operation along their full lengths. Safety considerations also dictate the need to separate the HST from roads and conventional rail (see Section 2.4.2.A, Alignment Requirements). As a result, it is not operationally feasible to run the HST down the center of SR 99, as suggested by some comments, does not exist. Further, to make greater use of existing corridors, additional right-of-way would be needed to provide sufficient width and curve radii for high-speed operations. This would necessitate acquisition and removal of substantially greater numbers of homes and businesses to expand and straighten these corridors, with greatly increased impacts on existing communities as the alignments pass through urban areas.</p> <p>In compliance with the objective of using existing corridors where feasible, in making decisions regarding HST alignments and station locations, the Authority and the FRA have maximized the use of existing transportation corridors where feasible and minimized impacts on both agricultural lands and communities. Accordingly, the Authority and FRA eliminated potential "new corridor" alignment alternatives to the west and east of SR 99 from further consideration in the Statewide Program EIR/EIS (Authority and FRA 2005) and have identified downtown station locations for study in Fresno and Bakersfield. These downtown locations would help to minimize impacts on agriculture while promoting urban infill development.</p> <p>To achieve the non-stop travel times in Proposition 1A, sustained operations over 200 mph are required throughout most of the Central Valley. Scheduled travel time for Amtrak trains between Bakersfield and Oakland averages 6 hours and 9 minutes, with an average speed of 51.3 mph (the maximum speed on the route is 79 mph) (Caltrans 2008a). The Amtrak plan for the next 10 years includes adding one more roundtrip per day between Oakland and Bakersfield and reducing the travel time between these two cities to below 6 hours (Caltrans 2008b). These improvements and upgrades will provide some benefit to rail passengers, but will not provide substantial passenger rail capacity to the San Joaquin Valley, nor approach HST's maximum nonstop service travel time between San Francisco and Los Angeles of 2 hours and 40 minutes in Proposition 1A. Track upgrades have limitations as many aspects of existing rail infrastructure, such as curves and at-grade road crossings, limit potential speed improvements. Additionally, almost all existing track is used for freight trains that operate at slower speeds than passenger trains. FRA regulations limit train speeds on routes that handle both freight and passenger traffic (CRS 2013). Intercity rail transportation in the Fresno to Bakersfield corridor is currently provided by the Amtrak California™ San Joaquin Route, operated by Caltrans on the railroad tracks owned by the BNSF Railway, and passenger train service must yield to freight trains, resulting in longer travel times and less schedule predictability for train passengers. For these reasons, track upgrades to the infrastructure used by Amtrak to improve service would not allow speeds necessary to meet a basic objective of the project.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-03: HST and Growth in the San Joaquin Valley – Measures to Realize Densification Benefits of HST – Role of Local Governments/Station Area Cities and Counties in Making it Happen
<p>Some comments questioned the role of the HST System in influencing growth, and the HST System's influence on station areas and local jurisdictions' growth.</p>	<p>The analysis of growth impacts involves modeling, using reasonable assumptions of future trends, to develop reasonable projections. Growth projections were made at a countywide level and are not as detailed as the analysis of direct impacts, such as the effect on waters of the U.S., which is calculated in fractions of an acre.</p> <p>As discussed in Section 3.18, Regional Growth, of the EIR/EIS, the analysis undertaken by the Authority and FRA show that the HST System has the potential to induce some growth and intensify growth near stations. Both population and employment in Fresno, Kings, Tulare, and Kern counties are projected to grow at a higher average annual rate than California as a whole and are described in detail in Section 3.18. The growth inducement analysis in Section 3.18 of the EIR/EIS shows that in counties analyzed within the study area (Fresno, Kings, Tulare, and Kern), the HST alternatives are projected to induce somewhat more population growth (about 3% more total population) and create additional future employment opportunities (about 4% more total jobs) than would occur under the No Project Alternative (refer to Table 3.18-18 in the EIR/EIS). The HST would help provide employment opportunities in the San Joaquin Valley counties, which traditionally have higher rates of unemployment than the statewide average and would encourage more compact growth around the proposed stations at greater intensities than currently exist. The project would also redirect development growth to central cities, in conjunction with the Senate Bill (SB) 375 (state legislation requiring regional targets for reduction of greenhouse gas [GHG] emissions) regional efforts, and future plans of the cities of Fresno and Bakersfield, and would reduce the pressure for the future conversion of farmlands by encouraging new investments around the stations in Fresno and Bakersfield, rather than in peripheral areas.</p> <p>HST construction- and operation-related employment impacts were estimated using a Regional Input-Output Modeling System (RIMS) II multiplier model of the Fresno, Kings, Tulare, and Kern county region. The analysis of population and employment growth updated the population and employment estimates that were originally developed for the growth analysis in the Bay Area to Central Valley Program EIR/EIS (Authority and FRA 2008). The potential impacts of induced employment growth were evaluated based on the infill potential and magnitude of land needed to accommodate the projected population and employment growth. The analysis of land consumption estimated the population and employment growth that could fit within the urban growth boundaries delineated by the current general plans of the counties of Fresno, Kings, Tulare, and Kern, and the cities of Hanford, Visalia, Corcoran, Wasco, Shafter, and Bakersfield. The population, employment, and land consumption estimates were then reviewed to characterize the potential secondary impacts (see Section 3.18.3, Methods for Evaluating Impacts).</p> <p>Under the No Project Alternative, the populations of Fresno, Kings, Tulare, and Kern counties are projected to increase by over 59%, 75%, 80%, and 81%, respectively, between 2010 and 2035. Rates of employment are anticipated to increase by approximately 35% in Fresno, 11.5% in Kings, 24.5% in Tulare, and 19.5% in Kern counties between 2010 and 2035. Refer to Table 3.18-4. While the recent changes in the economy have slowed this growth, the general long-term trends are expected to continue because the region attracts people seeking affordable housing, and the cities of Fresno and Bakersfield are the main economic centers.</p> <p>The EIR/EIS analysis shows that the HST alternatives would create additional employment and business opportunities and</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-03: HST and Growth in the San Joaquin Valley – Measures to Realize Densification Benefits of HST – Role of Local Governments/Station Area Cities and Counties in Making it Happen
	<p>attract higher-wage jobs in comparison to the No Project Alternative during both construction and operation (see Section 3.18). In addition, the HST project is forecasted to increase the population of the four-county region by approximately 110,649 more people (Table 3.18-18[I3]) when compared to the No Project Alternative. However, the HST alternatives would only slightly raise the projected population and employment growth beyond growth that would occur under the No Project Alternative. Despite the current economic downturn, substantial growth is projected to occur in the San Joaquin Valley over the next several decades. For example, the California Department of Finance's Population Projections for California and Counties (DOF 2013) anticipate that Fresno County's population will increase by 394,217 persons between 2010 and 2035, and during the same period Kern County will add 643,531 residents, Kings County will add 67,058 residents, and Tulare County will add 238,956 residents. The analysis of current general plans of cities and counties within the region found that the cities have enough area within their current spheres of influence to accommodate the planned growth to 2035 as well as the HST-induced growth. Accommodating HST-induced growth would, therefore, not impose an additional burden of future farmland conversion, or future extension of public infrastructure beyond what is currently planned.</p> <p><i>Relocation and Long Range Commuting</i></p> <p>The growth-inducement analysis in the EIR/EIS considered the potential for people to move from the coast to less expensive housing in the Central Valley, including commuters. However, the future conditions necessary to identify the sites where such commuters might live-including the location of employment centers, types of employment, range of salaries, price of fuel, regional and local land use plans and regulations-are unknown. Therefore, projecting the extent and specific locations of growth resulting from relocations from the coast would be a speculative endeavor and has not been undertaken. Some comments assert that the shortened travel time between the San Joaquin Valley, with its relatively low housing costs, and the Bay Area and Los Angeles Basin, which have both higher salaries and higher housing costs, would result in substantial numbers of coastal residents moving to the Valley and commuting to work on the HST System. However, travel time alone does not determine a reasonable commute mode and commute distance. Willingness to relocate in order to save housing costs is a function of housing cost, the quality of available housing (including quality of schools), commute time, and cost of the daily commute.</p> <p>The HST will not be a below market cost, subsidized commuter rail service, but instead would provide rapid long-distance travel, priced at commercial market rates. HST fares are expected to be tied to typical airplane fares. The cost of the fares will discourage relocation and a daily commute to and from the Bay area and the Los Angeles Basin.</p> <p><i>Growth at Proposed HST Stations</i></p> <p>Future development intensification near the Fresno and Bakersfield stations would help maximize system-wide ridership, support local land use plan changes near the stations encouraged by the San Joaquin Valley Blueprint and anticipated in the City of Fresno and City of Bakersfield General Plans, and reduce the demand for new development areas to the extent that some of the region's anticipated future growth would be captured by the mixed-use TOD envisioned for the areas around stations.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-03: HST and Growth in the San Joaquin Valley – Measures to Realize Densification Benefits of HST – Role of Local Governments/Station Area Cities and Counties in Making it Happen
	<p>The Kings/Tulare Regional station (either West or East alternatives) are not consistent with the general plans of either Kings County or the City of Hanford, nor are they discussed in the San Joaquin Valley Blueprint. The West alternative site is in line with urbanization trends in the Hanford area; the East alternative, on the other hand, is surrounded by agricultural land. Development of this station would reinforce the importance of Hanford as a transportation hub, but would not result in higher density development in the City's downtown.</p> <p>The Authority has determined that station-area development and value-capture at and around station sites are essential for promoting HST ridership, and recognize the need to work with local governments to ensure that effective land use policies are adopted and implemented. Therefore the Authority has developed HST Station Area Development General Principles and Guidelines (discussed in Section 3.13, Station Planning, Land Use, and Development) that articulate the following principles for development around the urban stations: (1) development density greater than the community average; (2) mixed land use; (3) compact, high-quality, pedestrian-oriented development; (4) an active, defined center; (5) limited, managed parking; and (6) public leadership (Authority 2011a). The Authority and FRA, along with the EPA, U.S. Housing and Urban Development, and the Federal Transit Administration (FTA), have also entered into a "Memorandum of Understanding for Achieving an Environmentally Sustainable High-Speed Train System in California," which includes a common goal of integrating HST station access and amenities into the fabric of surrounding neighborhoods (Authority and FRA, et al. 2011), available on the Authority's website.</p> <p>These principles have been at the forefront during project-level environmental review and will be particularly important in the selection of station sites, including those in Fresno and Bakersfield, and in implementing station development. HST station area development principles draw on TOD strategies from the MTC, Bay Area Rapid Transit (BART), and the Sacramento Area Council of Governments, among others, that have been effective at focusing compact growth within walking distance of rail stations and other transit facilities. The Authority recognizes that land use is within the purview of local government and acknowledges that local governments will play a key role in implementing station area development. This role would include adopting plans, policies, zoning provisions, and incentives for higher densities, and approving a mix of urban land uses within at least a 1/2-mile radius around proposed urban HST stations, as provided in the HST Station Area Development General Principles and Guidelines. The Authority has offered matching funds to local agencies for station area planning. The Authority has signed an agreement with, and is providing funding and technical assistance to, the City of Fresno for development of a station area plan that reflects the Authority's General Principles and Guidelines. The Authority has offered to provide similar funding and assistance to the City of Bakersfield, and although the City has not yet applied, the funding remains available.</p> <p>As discussed above, growth is expected to occur within the region under the No Project Alternative as well as with the HST System. The cities of Fresno and Bakersfield already have existing general plan policies promoting higher density downtowns, have undertaken redevelopment activities to help revitalize their downtowns, and are considering stronger general plan policies that would promote mixed uses near the HST stations (i.e., draft Fresno Downtown Neighborhoods Community Plan in progress as of May 2011). The San Joaquin Valley Blueprint generally encourages higher-density development near the stations of the proposed HST System. The "sustainable communities strategies" or "alternative planning strategies" to be</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-03: HST and Growth in the San Joaquin Valley – Measures to Realize Densification Benefits of HST – Role of Local Governments/Station Area Cities and Counties in Making it Happen
	<p>adopted by the Metropolitan Planning Agencies in Fresno, Kings, Tulare, and Kern counties pursuant to SB 375 (2008) are expected to include policies and transportation funding incentives that will encourage compact development patterns in order to meet the region's GHG reduction targets for automobiles and light trucks (5% by 2020, 10% by 2035). Therefore the project is not only consistent with existing local plans in Bakersfield and Fresno, the project would actually help create a market and help local government harness this market for intensified development near HST stations, in furtherance of those plans, to accommodate the needs of HST riders. That market driver would not exist without the HST System.</p> <p>The Transit Oriented Development Design Proposals for Fresno Final Report (UC Berkeley 2010) analyzed the potential effect of an HST station in Downtown Fresno. The report identified a number of vacant and underutilized parcels (i.e., surface parking lots) adjacent to the UPRR corridor that are available for infill development in the downtown area and how the existing wide streets in the downtown area provides opportunities for widened sidewalks, streetscapes, and bicycle lanes. Higher development densities in the station areas would translate into higher levels of transit, and the stations could become major transit hubs. Office development would be attracted to the area because of the improved access to the larger markets of Los Angeles and the Bay Area and the station could become an 18-hour destination as more commercial businesses are drawn to the area.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-04: Impacts to Agricultural Lands and the Agricultural Economy
<p>Numerous comments expressed concern over the loss of productive agricultural land, agricultural activities such as dairies, agriculture-related industries, and the resultant effect on the local economy.</p>	<p><i>Regional Agriculture and Loss of Agricultural Land</i></p> <p>The Central Valley of California is one of the most productive agricultural areas in the world. As described in Section 3.14 of the EIR/EIS, the project would have a direct effect on agricultural production through conversion of agricultural land to a transportation use, disruption of agricultural operations in Fresno, Kings, Tulare, and Kern counties, and a resultant indirect effect on the agricultural economy. Depending on the alternative, up to approximately 3,550 acres of farmland, including up to approximately 1,750 acres of prime farmland, would be converted to a transportation-related use as a result of the project. This would result in the permanent loss of these agricultural lands, which the EIR/EIS identifies as a significant impact under both NEPA and CEQA. The amount of land that would be removed from agricultural production in these counties is a very small percentage of the total agricultural land in these counties (see Table 3.14-2). Fresno County has about 2.2 million acres of agricultural land, including approximately 693,000 acres of prime farmland. Kings County has about 826,000 acres of farmland, including about 138,100 acres of prime farmland. Tulare County has about 1.3 million acres of farmland, including about 375,100 acres of prime farmland. Kern County has about 2.7 million acres of farmland, including about 626,200 acres of prime farmland. Nonetheless, the overall impact of the project on agricultural land in the Fresno, Kings, Tulare, and Kern counties is identified as a significant adverse impact (see Tables 3.14-10 and 3.14-11) and as contributing to cumulative farmland loss in the San Joaquin Valley.</p> <p>To mitigate this impact, the Authority will utilize the services of the Department of Conservation's Farmland Conservancy Program to identify suitable agricultural land for permanent preservation through the purchase of conservation easements from willing sellers (see AG-MM#1 in § 3.14.7). The Authority has negotiated a contract with the Department of Conservation for this purpose and provided initial funding for agricultural land mitigation in the Merced to Fresno and Fresno to Bakersfield sections. As identified in the scope of work for that contract, the Authority and the Department of Conservation will develop selection criteria for the easements that will include, but not be limited to, the requirements in Public Resources Code section 10252, including the prioritization of easements on lands adjacent to other protected agricultural lands or that provide greenbelts or urban separators that have the added benefit of limiting urban sprawl. This mitigation measure will lessen the impact, but the EIR/EIS recognizes that the converted farmland will be permanently lost for the production of agricultural commodities.</p> <p>In total, the four counties in the Fresno to Bakersfield Section accounted for about \$11.9 billion of the total \$37.5 billion (or about 32%) of the agricultural revenue generated in the state in 2010 (CDFA 2010). The project would have an effect on agricultural production through its conversion of agricultural land and effects on infrastructure (including access roads). It is expected that some of this production would relocate elsewhere within the San Joaquin Valley. Relocation would depend upon a number of variables, including the desires of the displaced farm owners, and cannot be accurately predicted. In some cases, production could not be easily replaced given the limited availability of suitable replacement lands or difficulties related to permitting necessary to continue production at a new site. Affected dairies, in particular, would require new permits from state (i.e., Regional Water Quality Control Board [RWQCB] water quality permit) and local (i.e., conditional use permit [CUP]) agencies before a new site could be approved. Transferring production to other permitted dairies may occur to some extent, but would be limited to the permitted capacity of those dairies (typically either capacity for waste disposal under the RWQCB permit or total cows under a local CUP). Whether such permits could be obtained in a timely manner, or at all, is uncertain.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-04: Impacts to Agricultural Lands and the Agricultural Economy
	<p>Some relocated agricultural production would take time to re-establish full production levels. In addition, any reduced agricultural production would have an additional multiplier effect on the region's economy and could affect businesses involved in agricultural services, food processing, and the transportation of goods (see Section 3.12). In order to address this concern, the EIR/EIS includes a new commitment (see Section 3.14.6, Project Design Features) to assign a representative to act as a single point of contact to assist each confined animal facility owner during the process of obtaining new or amended permits or other regulatory compliance necessary to the continued operation or relocation of the facility. For information on relocation assistance, see Chapter 3.12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and FB-Response-SO-01.</p> <p><i>Dairies</i></p> <p>Fresno, Kings, Tulare, and Kern counties support a large number of dairies. According to the California Department of Food and Agriculture, in 2010 there were 106 dairies in Fresno County (with 1,118 cows/dairy), 143 dairies in Kings County (with 1,338 cows/dairy), 311 dairies in Tulare County (with 1,615 cows/dairy), and 54 dairies in Kern County (with 3,979 cows/dairy). The number of dairies operating in these counties varies from year to year. For more information on the impacts to dairies see FB-Response-AG-06.</p> <p>The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Relocation Act) (42 United States Code [U.S.C.] Ch. 61). For more information on the Uniform Relocation Act, see Chapter 3.12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and FB-Response-SO-01.</p> <p>The project must also adhere to California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available on the Authority's website. Even with this assistance there would be potential for temporary disruption to agricultural operations as production is reallocated between owners, where severed parcels are transferred to adjoining owners, and as facilities are relocated. Related economic sectors, such as processing facilities, could also experience some short-term multiplier effects from reduced production.</p> <p><i>Employment</i></p> <p>Employment in the agricultural sector accounted for about 20% of the total industry employment in 2008 in Fresno, Kings, Tulare and Kern counties (see Section 3.12.6). The conversion of agricultural land could result in a reduction in the number of farm workers, who could be negatively affected if the acquisition were to result in permanent job losses or they were unable to find work on another farm or industry in the region. This effect would be minimized if the agricultural production were to relocate elsewhere in the region.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-04: Impacts to Agricultural Lands and the Agricultural Economy
	<p><i>Road Closures</i></p> <p>In addition to the permanent property acquisitions, the project would also result in road closures where the alignment would be at-grade. Permanent road closures resulting from the project were examined to identify potential effects on regional access for agricultural operations (please see Section 3.14.5). The potential effects from restriction in regional access include increased costs to operations and increased difficulties in moving workers and equipment to cultivate and harvest fields and deliver products to processing facilities and markets. However, for all HST alternatives and HMF locations, the road closures associated with the project would be dispersed and detours to alternative routes would be approximately 2 miles long or less. As a result, regional access for agricultural operations (e.g., moving workers and equipment to cultivate and harvest fields and deliver products to processing operations and markets) is not expected to be restricted.</p> <p><i>Impacts to Individual Agricultural Operations</i></p> <p>The HST project in the Fresno to Bakersfield Section would adversely affect individual farms and other agricultural operations. Construction of the HST System would result in disruption to or removal of existing infrastructure such as buildings and other structures, pumps and wells, reservoirs/tailwater ponds, irrigation systems (including distribution lines, canals, and gravity flow systems), power supplies, and access.</p> <p>The Authority and FRA are sensitive to the importance of these disruptions to agricultural operations, including the acquisition of all or a portion of infrastructure needed for agricultural operations. The Authority will acquire right-of-way for the high-speed train project in accordance with the Uniform Relocation Act (42 U.S.C. Ch. 61). The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Chapter 3.12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and FB-Response-SO-01. The project must also adhere to California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available on the Authority's website.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-05: Community Impacts – Focus on Impacts for Communities That Would Not Have a Station
<p>Many comments were received from residents of communities where stations would not be located, such as Corcoran, Wasco, and Shafter, stating that they would be adversely impacted but would not receive any benefit compared to the communities that do have stations. Impacts they were concerned about included community division, acquisitions, agricultural impacts, visual changes, noise, and dust.</p>	<p>The HST stations are planned for the Fresno, Hanford, and Bakersfield areas. With the staff-proposed preferred alternative, the HST tracks would travel through Wasco, Shafter and unincorporated communities outside of these cities, but no stations would exist there. In much of the region, the HST alternatives follow existing rail lines in established transportation corridors, but could still affect communities by widening an existing community division, displacing homes and businesses, and introducing a new source of noise and prominent new visual element. Resource impacts (such as transportation, noise, and air quality) that have the potential to affect community cohesion are presented in Section 3.12.8. Mitigation Measure SO#1 has been developed to reduce the impacts in rural residential communities outside of HST station areas that would experience significant impacts associated with the project alternatives.</p> <p>Many of the communities along the HST project area are adjacent to freight and passenger railroad tracks. The trains passing through the existing at-grade crossings are required to blow their horns as a warning to oncoming traffic and pedestrians, which is often very disruptive to the nearby residents. Unlike freight trains, the HST requirements for a grade-separated track mean no horn noise would be generated. The HST would generate noise, and as discussed in Section 3.4.5, without mitigation, noise effects for many sensitive receivers in rural areas along the HST alternatives would have substantial intensity under NEPA and the impact would be significant under CEQA. These effects would be decreased to a less-than-significant level at most locations with the implementation of the proposed mitigation measures presented in Section 3.4.7. Figures 3.4-15 through 3.4-19 show the locations where the criteria were met for the construction of sound barriers for all HST alternatives. The noise receivers severely impacted in rural areas that would not be mitigated with a sound barrier would receive other forms of mitigation, such as building insulation or payment of property noise easements.</p> <p>The aesthetic and visual impacts resulting from the introduction of new structures such as the HST tracks and road overpasses would be distributed across the entire alignment, but may be perceived as more prominent in these communities. See Section 3.16, Aesthetics and Visual Resources, for complete information on the impacts and mitigation measures proposed to address these issues, including AVR-MM#2f: Landscape Treatments along the HST Project Overcrossing and Retained Fill Elements of the HST. Where the elevated guideway or overpass is adjacent to residential areas, the Authority will plant trees along the edges of the right-of-way to help reduce the visual contrast. The Authority will also plant vegetation within lands acquired for the project after construction is complete. This type of mitigation measure is commonly used for large infrastructure projects to minimize impacts resulting from the introduction of new structures. Also, SO-MM#7- Develop measures to minimize the potential for physical deterioration, explains the Authority has committed to working with impacted communities on the design of these features, consistent with Technical Memorandum 200.6, Aesthetic Guidelines for Non-Station Structures.</p> <p>The HST project will require the displacement of residential, business, and community facilities in these communities. See FB-Response-SO-01 for complete information on property acquisitions, displacements, and relocations. The Authority is required to comply with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). The act and its amendments provide guidance on how federal agencies, or agencies receiving federal financial assistance for a project, will compensate for impacts on property owners or tenants who need to relocate if they are displaced by the project. To ensure compliance with the Uniform Act the Authority has adopted the California Department of Transportation (Caltrans) Right of</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-05: Community Impacts – Focus on Impacts for Communities That Would Not Have a Station
	<p>Way Manual as the basis for all business and residential relocations on the project. Consistent with both the Uniform Act and the Caltrans Right-of-Way Manual, the Authority will compensate all property owners or tenants in accordance with this act, which applies to all real property. All benefits and services will be provided equitably without regard to race, color, religion, age, national origins, and disability, as specified under Title VI of the Civil Rights Act of 1964. This Relocation Assistance Program was developed to help displaced individuals move with as little inconvenience as possible and has commonly been used for large infrastructure projects that displace a large number of residences and businesses, and is considered successful standard practice for mitigating the impacts to individual property owners.</p> <p>The potential for short-term reductions in property and sales tax revenues in these communities are discussed in Section 3.12.8, as the need to acquire land for the project will necessitate the relocation of residences and businesses along the project alignment. See FB-Response-SO-05 for complete information on the loss of property and sales tax revenues. The analysis in Section 3.12.8 describes how a short-term reduction in property tax revenues may occur due to property acquisition by removing parcels from county tax rolls. This estimated amount ranges from a low of 0.03% of the total fiscal year 2009-2010 property-tax revenue of Tulare County to a high of 0.2% in Kings County. Therefore, the intensity is negligible for all alternatives, because the economic impact is measurable, but would not be perceptible to community residents. Some short-term reductions in sales tax revenues are expected because the need to acquire land will necessitate the relocation of businesses along the project alignment. Although relocations in the same vicinity would limit losses in sales tax revenues for local jurisdictions, the potential for temporary sales tax loss would remain, either because businesses would temporarily close during these relocations or because some might choose to close down rather than relocate. With the relocation assistance provided under the Uniform Act, including assistance in finding replacement properties, moving expenses, and obtaining permits, temporary reductions in sales tax revenue from business displacement would be minimal. This amount ranges from a low of less than 0.01% of the total fiscal year 2009-2010 combined sales tax revenue collected in Kings, Tulare, and Kern counties to a high of 0.09% in Fresno County.</p> <p>Section 3.12.8 details how the project-related purchases made locally at the construction sites will result in increased sales tax revenues for cities and counties in the project area. Unless exempted, all transactions for tangible assets related to the project would be subject to sales tax. This includes materials such as gasoline, oil, and parts that will be purchased locally. Additionally, new or existing businesses in the project area that supply goods and services to construction workers (e.g. retail stores, gas stations, banks, restaurants, and service companies) could benefit from increased patronage. The project would generate an estimated \$1.5 million annually in direct new sales tax revenues for the region through project spending on construction and operation. As a result, the expected annual gain in sales tax revenue from project spending is greater than the expected loss from residential and business relocations.</p> <p><i>Project Benefits</i></p> <p>As discussed in Chapter 1, California’s population is growing rapidly and, unless new transportation solutions are identified, traffic will only become more congested and airport delays will continue to increase. The purpose of the Fresno to Bakersfield HST includes providing travel between major urban centers and connectivity to airports, mass transit systems, and the</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-05: Community Impacts – Focus on Impacts for Communities That Would Not Have a Station
	<p>highway network in the south San Joaquin Valley. Many of the communities along the HST project area are currently served by Amtrak. The San Joaquin Corridor Strategic Plan (Caltrans 2008b) and San Joaquin Corridor Service Development Plan (Caltrans 2013) recognize that current Amtrak passenger trains have the opportunity to interface with the HST System and serve as a collector/distributor, and contribute to a program of improvements that will increase rail ridership, revenue, capacity, and reliability within the corridor. Joint stations at major cities such as Fresno, Bakersfield, Sacramento and Merced would become interchange points that will allow for passengers to transfer to and from Amtrak to the HST System. During HST construction, the opportunity exists for Amtrak to “bridge” service in different regions, such as between the Bay Area and Merced, and between Los Angeles and Palmdale. As a result, even the communities not located immediately adjacent to a HST station will benefit from the improved connectivity of Amtrak with the HST System.</p> <p>The HST System would also be beneficial to communities in the region by improving access to jobs and amenities, reducing travel times, reducing traffic congestion, and by providing new employment opportunities through project construction and operation. The unemployment rates across the four-county region are among the highest in the state. As of October 2010, unemployment rates were 15.7%, 15.0%, 15.9%, and 14.4%, respectively, for Fresno, Kings, Tulare, and Kern counties (CEDD 2010). The HST Fresno to Bakersfield Section is estimated to create approximately 22,800 one-year, full-time job equivalents within Fresno, Kings, Tulare, and Kern counties over the entire construction period. Direct jobs in the construction sector comprise around 33% of this total estimate—or approximately 7,600 one-year, full-time job equivalents—while annual indirect and induced jobs created in the region comprise approximately 67% of this total, or about 15,200. During the peak construction activity (2015–2018) approximately 4,750 workers would be needed annually (with approximately 1,600 direct jobs in the construction sector and 3,150 indirect and induced jobs in other sectors). With the addition of a large construction project, such as the Fresno to Bakersfield Section, the increased demand for workers and spending in the region would stimulate local economies. Because of the high unemployment rates in the region and the loss of construction jobs during the recession, the existing regional labor force is anticipated to fill the demand for these jobs.</p> <p>Additionally, long term jobs would be created to operate and maintain the project as well as jobs created as a result of the improved connectivity of the region to the rest of the state. As presented in Section 3.12.8, it is estimated that approximately 47,500 new jobs would be created by 2035 in the region as a result of the operation of the HST System. This total would include the direct jobs to operate and maintain the project in the region (approximately 2,000 jobs); the indirect and induced jobs created to support these new workers; and the additional jobs created as a result of the growth in the overall regional economy. The total number of new jobs created is estimated to be a 3.2% increase in total employment above the 2035 estimate of 1.4 million total jobs in the region under the No Project Alternative (Cambridge Systematics 2010). The cities and communities along the HST project area have greater unemployment and a lower per capita income than the state as a whole. To ensure that these jobs will benefit the economically distressed areas in the region, the Authority has adopted a Community Benefits Policy (CBP), which helps to remove the barriers of finding qualified workers, including small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the High-Speed Rail System. The CBP requires that design-build construction contracts adhere to the National Targeted Hiring Initiative, which states a minimum of 30% of all project work hours shall be performed by National Targeted Workers and a minimum of 10% of National Targeted Workers hours shall be performed by</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-05: Community Impacts – Focus on Impacts for Communities That Would Not Have a Station
	Disadvantaged Workers. This, along with other hiring policies, will make sure that employment and business opportunities created by the project are accessible to the local communities.

Comment Summary	Response														
GENERAL	FB-Response-GENERAL-06: Relationship of the Authority’s Business Plan to the Analysis in the EIR/EIS														
Many comments expressed concern about project ridership and how it relates to the Revised 2012 Business Plan. The cost of riding the HST was also a question.	<p>The Revised 2012 Business Plan, which was approved by the CHSRA April 12, 2012, presents a range of ridership forecasts for the HST System in 2040, with a focus on Full Phase 1 ridership. These forecasts differ from those presented in the Fresno to Bakersfield EIR/EIS, which rely on forecasted ridership for the full HST System assuming a high ridership level (refer to Section 2.5 of the EIR/EIS). The forecasts differ because they were developed for distinct purposes and are based on different assumptions. The underlying project, construction of the HST between Fresno and Bakersfield, remains the same and the separate preparation of business planning forecasts does not invalidate the environmental analysis presented in the EIR/EIS or change the nature or scope of the underlying project. The ridership forecasts described in the EIR/EIS appropriately support the evaluation of potential environmental impacts.</p>														
	<p>In contrast to the purpose of the Business Plan ridership study, the purpose of the EIR/EIS ridership forecasts was to help the Authority and FRA appropriately analyze and understand the potential environmental impacts of the project. To avoid underestimating the potential environmental effects of the project, the EIR/EIS forecasts identify reasonable, higher levels of ridership on the HST System. This ensured that the EIR/EIS would adequately identify and disclose potential environmental impacts and identify applicable mitigation measures. To avoid underestimating ridership, the forecasts were based on more optimistic assumptions about future population growth than those in the 2012 Business Plan. Additionally, the EIR/EIS presents a range of forecasts based on the relatively higher HST ticket prices assumed in the 2012 Business Plan (83% of airfare), as well as a lower fare assumption (50% of airfare) that generates more riders.</p>														
	<p>The ridership model includes the effect of improvements in the transportation network on overall trip-making such as the phenomenon described as "latent demand." The number of total inter-regional trips with the HST full system statewide in 2035 is expected to be on the order of a million more annually. However, this is not as large as the forecast diversion of trips from cars and aircraft, so overall miles driven in the state and the San Joaquin Valley counties are forecast to go down by several percent. The project benefits associated with a reduction in vehicle traffic have been updated to include a scenario that assumes a less optimistic ridership forecast based on high fares (83% versus 50% of air fare). This provides a "worst case" benefits scenario similar to the "worst case" impacts scenario based on higher ridership levels (50% of air fare). The following table compares the EIR/EIS and Draft 2012 Business Plan forecasts. Note that this is for year 2035, to allow a direct comparison between common forecast years.</p> <table><tr><th>Ridership Forecast</th><th>Full Phase 1 (in millions of passengers)</th><th>Full System (in millions of passengers)</th></tr><tr><td>EIR/EIS low forecast (ticket price at 83% of airfare)</td><td>40.2</td><td>69.3</td></tr><tr><td>Business Plan medium ridership scenario (ticket price at 83% of airfare)</td><td>35.8</td><td>51.2</td></tr><tr><td>EIR/EIS high forecast (ticket price at 50% of airfare)</td><td>57.0</td><td>98.2</td></tr><tr><td>Business Plan high forecast (ticket price at 50% of airfare)</td><td>53.0</td><td>77.0</td></tr></table>	Ridership Forecast	Full Phase 1 (in millions of passengers)	Full System (in millions of passengers)	EIR/EIS low forecast (ticket price at 83% of airfare)	40.2	69.3	Business Plan medium ridership scenario (ticket price at 83% of airfare)	35.8	51.2	EIR/EIS high forecast (ticket price at 50% of airfare)	57.0	98.2	Business Plan high forecast (ticket price at 50% of airfare)	53.0
Ridership Forecast	Full Phase 1 (in millions of passengers)	Full System (in millions of passengers)													
EIR/EIS low forecast (ticket price at 83% of airfare)	40.2	69.3													
Business Plan medium ridership scenario (ticket price at 83% of airfare)	35.8	51.2													
EIR/EIS high forecast (ticket price at 50% of airfare)	57.0	98.2													
Business Plan high forecast (ticket price at 50% of airfare)	53.0	77.0													

Comment Summary	Response
GENERAL	FB-Response-GENERAL-06: Relationship of the Authority's Business Plan to the Analysis in the EIR/EIS
	<p>The higher ridership estimates for the EIR/EIS reflect a conservative approach allowing the Authority and FRA to understand the environmental impacts at the highest reasonable forecast of ridership. The level of annual HST ridership influences the frequency of service, thereby affecting the level of environmental impacts related to traffic, air quality, noise, and energy. The EIR/EIS uses the high ridership forecast for analyzing the anticipated adverse environmental impacts from operating the HST System. This "worst-case scenario" approach ensures disclosure of the higher level of adverse environmental effects that may occur with higher ridership (e.g., pass-by train noise, station-area traffic). If eventual ridership is lower, adverse environmental impacts would also be lower.</p> <p>The ridership numbers are projections for the year 2035, assuming an average condition of the economy rather than either a booming economy such as California experienced in the late 1990s or the current economic downturn. Factors such as population and employment growth, the quality of the rail service, and future driving costs are just as important in the long run as the ups and downs of the economic cycle, and travel does not stop because of a recession. For example, 40% more people rode the San Joaquin trains in 2010-2011 than in 2000-2001, even with much higher unemployment last year than at the beginning of the decade (see 2008 California State Rail Plan [Caltrans 2008a], p. 119 and Amtrak news release Sept 29, 2011 [Amtrak 2011]).</p> <p>It is important to keep in mind that total forecast annual ridership on the HST System is not the primary driver of most aspects of HST System design. While the Authority and FRA weighed ridership and revenue potential in evaluating alignment and station alternatives, the design of most HST System components is dictated by the agencies' performance objectives and safety requirements, rather than by total annual ridership. For example, in order to meet the Authority's performance objectives and the speed and trip time (including the requirements of Proposition 1A), the HST System will have at least two-tracks throughout, with four tracks at intermediate stations.</p> <p>Certain aspects of the HST System design are influenced by ridership. For example, the size of the HMF and the light maintenance facilities is based on the 2035 full system high ridership forecast to ensure adequate sizing of these facilities to accommodate maximum future needs. This approach is consistent with general planning and design practices for a large infrastructure project, acquiring enough land for future needs up front rather than trying to purchase property at a later date when it may no longer be available or impractical to acquire.</p> <p>For stations, forecast annual ridership and peak-period ridership play a role in determining the size of some station components, such as those required for public access and egress, including parking. The 2035 full-system, high-ridership forecast formed the basis for the conceptual service plan, which in turn influenced the station designs so that station facilities would be sufficient to accommodate the anticipated future use of the HST System, which is expected to build over time. The 2012 Business Plan similarly anticipates that future growth of the system will be phased over time.</p> <p>In the EIR/EIS, the 2035 full system high ridership forecast was used to estimate the maximum potential station parking demand and to allow for an analysis of where and how parking demand might be accommodated near the HST station. The EIR/EIS's analysis of high forecasts for parking provides flexibility over time to reduce the amount of station parking</p>

Comment Summary	Response												
GENERAL	FB-Response-GENERAL-06: Relationship of the Authority’s Business Plan to the Analysis in the EIR/EIS												
	<p>based on more refined demand projections and TOD around station areas. Land use development around the HST stations is assumed in the EIR/EIS to occur over time. The amount of nearby development, as well as the future availability of local transit connections, both of which tend to decrease parking demand, will influence the future need for parking. While HST would be a catalyst for such development, its timing would be dictated by land use decisions by the cities of Fresno and Bakersfield and market conditions. Demand for parking facilities would also depend on how HST ridership grows over time. The Authority and FRA would therefore retain the flexibility to make decisions about what parking facilities to construct initially and how additional parking might be phased or adjusted depending on how the HST System ridership increases over time. For example, it is possible that some parking facilities might be constructed at the 2020 project opening, only to be replaced in whole or in part, or augmented later with development or other parking facilities (see Section 2.5.3).</p> <p>In February, the Authority issued a Draft 2014 Business Plan. The Draft 2014 Business Plan maintains the core elements of the 2012 Business Plan. The ridership and revenue forecasts were updated for the 2014 Business Plan based on an enhanced model and some new travel data, as explained in more detail in Chapter 4 of that document. A comparison of the ridership forecasts in the two business plans is presented below.</p> <table><tr><th>Ridership Forecast</th><th>2012 Business Plan Forecasts Phase 1 Blended System in 2040^a</th><th>2014 Business Plan Forecasts Phase 1 Blended System in 2040^b</th></tr><tr><td>High</td><td>32.6</td><td>45.0</td></tr><tr><td>Medium</td><td>26.4</td><td>34.9</td></tr><tr><td>Low</td><td>20.1</td><td>26.1</td></tr></table> <p>Sources: ^a Revised 2012 Business Plan Exhibit 5-10 ^b Draft 2014 Business Plan Exhibit 4.1</p> <p>This comparison shows that the Draft 2014 Business Plan ridership forecasts are similar to, but slightly higher, than in the Revised 2012 Business Plan. The 2014 Business Plan forecasts are still lower, however, than for the Fresno to Bakersfield Section Final EIR/EIS for the same reasons explained above.</p>	Ridership Forecast	2012 Business Plan Forecasts Phase 1 Blended System in 2040 ^a	2014 Business Plan Forecasts Phase 1 Blended System in 2040 ^b	High	32.6	45.0	Medium	26.4	34.9	Low	20.1	26.1
Ridership Forecast	2012 Business Plan Forecasts Phase 1 Blended System in 2040 ^a	2014 Business Plan Forecasts Phase 1 Blended System in 2040 ^b											
High	32.6	45.0											
Medium	26.4	34.9											
Low	20.1	26.1											

Comment Summary	Response
GENERAL	FB-Response-GENERAL-07: Length of Review Period for the Draft EIR/EIS and the Revised DEIR/Supplemental DEIS
<p>Some comments assert that agencies and the public were not given sufficient time to review the environmental documents. They note that both the Draft EIR/EIS and RDEIR/SDEIS are very large and therefore reviewers should have been allowed substantially more than 60 days to review the document and submit their comments.</p>	<p>The following is a general timeline for the publication of the Fresno to Bakersfield Section Draft EIR/EIS and the opportunity for public comment:</p> <ul style="list-style-type: none"> • The Draft EIR/EIS was posted on the Authority's and FRA's websites for public review on August 9, 2011. • By August 12, 2011, hardcopies of the Draft EIR/EIS were available for public review at 13 public repositories consisting primarily of libraries along the project corridor. • Formal notice was published in the Federal Register (FR) on August 12, 2011, which triggered a 45-day public review and comment period ending on September 28, 2011. • The Draft EIR/EIS was formally made available to California state agencies by the State Clearinghouse beginning August 10, 2011. • On September 8, 2011 FRA published a notice in the FR and the Authority provided notice advising the public that the comment period would be extended until October 13, 2011. This initial public review and comment period ended a full 60 days after the August 9th notice was published regarding the availability of the Draft EIR/EIS for public review and comment. • The Authority and FRA held formal hearings in the project area and written and verbal comments accepted from the public on September 20, 21, and 22, 2011. <p>Based on substantive comments received during the public and agency review of the Draft EIR/EIS, the Authority decided to reintroduce alignment alternatives west of Hanford. In response to concerns raised by stakeholders in metropolitan Bakersfield, the Authority and FRA also decided to evaluate another alternative in Bakersfield (Bakersfield Hybrid Alternative) that would minimize impacts to residential and community facilities. The Authority and FRA determined that the introduction of these new alternatives and refinements being considered for the Fresno to Bakersfield route alternatives required publication of the RDEIR/SDEIS in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).</p> <p>The following is a general timeline for the publication of the Fresno to Bakersfield Section RDEIR/SDEIS and the opportunity for public comment:</p> <ul style="list-style-type: none"> • The RDEIR/SDEIS was posted on the Authority's and FRA's website for public review on July 20, 2012. • By July 20, 2012, hardcopies of the RDEIR/SDEIS were available for public review at 50 public repositories consisting primarily of libraries and community centers along the project corridor. • Formal notice was published in the FR on July 20, 2012, which triggered a 60-day public review and comment period ending on September 20, 2012. • The RDEIR/SDEIS was formally made available to California state agencies by the State Clearinghouse beginning July 20, 2012. • On September 14, 2012 FRA published a notice in the FR and the Authority provided notice advising the public that the comment period would be extended until October 19, 2012. This initial public review and comment period ended

Comment Summary	Response
GENERAL	FB-Response-GENERAL-07: Length of Review Period for the Draft EIR/EIS and the Revised DEIR/Supplemental DEIS
	<p>a full 90 days after the notice was published regarding the availability of the RDEIR/SDEIS for public review and comment.</p> <ul style="list-style-type: none"> The Authority and FRA held formal hearings in the project area and written and verbal comments accepted from the public on August 27, 28, and 29, 2012. <p>To help facilitate review of the RDEIR/SDEIS, text that had been added or changed from the Draft EIR/EIS was highlighted in grey. In this way, agencies and members of the public who had reviewed the Draft EIR/EIS could focus their attention on the additional information and revised text that was provided in the RDEIR/SDEIS.</p> <p>The 60-day period of review for the Draft EIR/EIS and the 90-day period of review for the RDEIR/SDEIS exceed the time required under CEQA and under FRA's Procedures for Considering Environmental Impacts, as quoted below. The CEQA Guidelines provide:</p> <p>"The public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days except under unusual circumstances. When a draft EIR is submitted to the State Clearinghouse for review by state agencies, the public review period shall not be less than 45 days, unless a shorter period, not less than 30 days, is approved by the State Clearinghouse" (14 CCR 15105).</p> <p>Likewise, Section 13(c)(9) of the FRA Procedures for Considering Environmental Impacts provides:</p> <p>"The draft EIS shall be made available for public and agency comment for at least 45 days from the Friday following the week the draft EIS was received by EPA. The time period for comments on the draft EIS shall be specified in a prominent place in the document, but comments received after the stated time period expires should be considered to the extent possible" (64 FR 101, page 28545, May 26, 1999).</p> <p>The Authority and FRA believe the time provided was sufficient for the public to review and provide comments on the Fresno to Bakersfield Draft EIR/EIS and the RDEIR/SDEIS.</p> <p>Recognizing that the Draft EIR/EIS and the RDEIR/SDEIS were lengthy documents, the Authority and FRA provided extensive outreach to the community. For example, a Hanford project office was opened in downtown Hanford at the time of the release of the Draft EIR/EIS and staffed four days a week. Printed copies of the Draft EIR/EIS, and related materials, including maps and appendices, were available for the public to review, and ask questions about. The office was staffed with one to two outreach and/or project engineers and remained open through the release of the RDEIR/SDEIS. In addition, the Authority and consultant staff held a number of advertised public workshops in the project area during the review periods for both documents to give the public an opportunity to ask questions and collect information about the project prior to the more formal public hearings. Four public workshops were held in late August 2011 in Rosedale, Wasco, Corcoran, and Fresno for the Draft EIR/EIS and four public workshops were held in mid-August 2012 in Bakersfield, Wasco, Corcoran and Fresno for the RDEIR/SDEIS, at which members of the public could review copies of the environmental documents and obtain help in identifying how the project might affect their property. Formal public hearings were held in Fresno, Hanford, and Bakersfield,</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-07: Length of Review Period for the Draft EIR/EIS and the Revised DEIR/Supplemental DEIS
	<p>and written and verbal comments were accepted on September 20, 21, and 22, 2011 on the Draft EIR/EIS and on August 27, 28, and 29, 2012 on the RDEIR/SDEIS.</p> <p>To ensure that agencies and the public had the opportunity to review and comment on the Draft EIR/EIS and the RDEIR/SDEIS, the Authority and FRA provided widespread notice of its availability. Chapter 7 of the Draft EIR/EIS and the RDEIR/SDEIS, and Chapter 8 of the Final EIR/EIS lists the agencies, Native American tribes, elected officials, and organizations and businesses that were provided notice of the availability of these two documents (the Authority has a complete list on file of all entities who received notices). On August 9, 2011, the Authority sent a press release to all major newspapers in the area advising the public of the availability of the Draft EIR/EIS on the Authority's website. The same type of press release was sent by the Authority on July 20, 2012 advising the public of the availability of the RDEIR/SDEIS on the Authority's website. Notices were also placed in newspapers of general circulation in the area and in the FR.</p> <p>The Authority also mailed notices to the agencies, elected officials, Native American tribes, organizations, and individuals on the project's mailing list; over 23,000 for the Draft EIR/EIS, and over 25,000 for the RDEIR/SDEIS. This included the owners of land adjoining and near the alternative alignments. The Authority used the County Assessors' rolls in Fresno, Kings, Tulare, and Kern counties to identify landowners.</p> <p>The Draft EIR/EIS and the RDEIR/SDEIS were made available to the public for review in several ways. As noted above, the documents were posted on the Authority's website. Printed and electronic copies were made available in 40 libraries and community centers located in Fresno, Clovis, Hanford, Lemoore, Corcoran, Laton, Hanford, Tulare, Visalia, Delano, Shafter, and Bakersfield. Copies were sent to cooperating federal agencies, state responsible and trustee agencies (including copies sent through the State Clearinghouse), and were available at the Authority's office in Sacramento. CDs of the Draft EIR/EIS and RDEIR/SDEIS including all technical appendices in electronic form were sent, without charge, to all who requested them.</p> <p>The public was given the opportunity to comment in any of several ways. Comments could be submitted to the Authority and FRA by card or letter (including cards and letters submitted at the public hearings), verbally at the public hearings, and by means of e-mail.</p> <p>However, the formal review period does not limit the consideration of comments received from agencies, organizations, and the public after the end of the prior comment period. The Authority and FRA have considered comments received after October 13, 2011 on the Draft EIR/EIS and after October 19, 2012 on the RDEIR/SDEIS. These comments are reproduced here in Volumes IV and V of the Final EIR/EIS.</p> <p>A total of approximately 1,450 submission letters (a submission letter by an individual or organization could consist of one or multiple comments) were submitted on the Draft EIR/EIS. These were provided via e-mail, submitted at the public meetings and hearings, via mailed letters, via fax, and via the Authority's website. An additional 800 submission letters were received on the RDEIR/SDEIS.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-07: Length of Review Period for the Draft EIR/EIS and the Revised DEIR/Supplemental DEIS
	<p>Some comments have asked about the availability of technical reports prepared in support of the Draft EIR/EIS and RDEIR/SDEIS. Technical reports were prepared to record additional details on the environmental setting, impact assessment methodology, and environmental impacts for the following environmental disciplines: transportation, air quality, noise and vibration, biological resources and wetlands, geology, hazardous wastes, community impacts, relocations, cultural resources, and aesthetics and visual resources. The EIR/EIS draws from the technical data and analysis in the reports and studies and provides that analysis in a full, but more accessible form for the public. All of the technical reports except for the reports on cultural resources were posted on the Authority's website for public review at the same time as the Draft EIR/EIS and the RDEIR/SDEIS. The Authority provided copies of technical reports upon request and the availability of these technical reports was included in the notices to agencies, elected officials, Native American tribes, organizations, individuals on the project's mailing list, and owners of land adjoining and near the alternative alignments and copies were provided to any person who requested one. Although the Preface to the RDEIR/SDEIS included wording that incorrectly implied that technical reports would be made available at public libraries and community centers, this was not the case. Due to the extensive volume of material, the technical reports were provided through the Authority's website, and were made available electronically on CD to anyone who requested them.</p> <p>The cultural resources technical reports were treated in a different manner and were not made available to the general public on the Authority's website in order to protect sensitive resources. This approach is consistent with state and federal statutes providing protection for certain information related to the location and type of certain cultural resources. In addition, specific locations of wetlands and known populations of threatened and endangered species were also redacted from the biological resources and wetlands technical reports made available to the general public to protect those resources. The Authority and FRA provided redacted cultural resources technical reports and redacted biological and wetlands information to experts in the fields of historic architecture, archaeology, and biology upon their request. The redacted cultural resource reports were provided to the city of Fresno by request, and would be provided to the other jurisdictions along the alignment at their request, e.g. the cities of Hanford, Wasco, Shafter, and Bakersfield, and associated counties.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-08: Consultation with Public Agencies
<p>Some commenters allege that the Authority and FRA have failed to consult with local public agencies as required by law.</p>	<p>The Authority and FRA have consulted extensively with local government officials and local public agency staff during the planning and design of the HST project in the Fresno to Bakersfield section, including during development of the range of alternatives for study, as reflected in the Preliminary and Supplemental AA Reports. Chapter 7 of the RDEIR/SDEIS documents local public agency consultation activities (see Table 7-1) from 2007 to July 2012. Chapter 8 of the Final EIR/EIS documents local public agency consultation activities from July 2012 to present. This chapter has been updated in the Final EIR/EIS to add a listing of consultation that occurred following release of the RDEIR/SDEIS, including those with local public agencies.</p> <p>The HST project is being undertaken by a state agency (the Authority) and a federal agency (the FRA). The project must conform to the policies and objectives of the statutes and regulations under which the Authority and FRA operate. Some commenters suggest the HST project must conform to local general plans. Since an agency of the state of California is the project proponent, The HST project is not subject to local government general plan policies or zoning regulations. Nevertheless, the Authority and FRA recognize that the HST project can be most successful if designed in a manner that is as sensitive as possible to the local environment through which it must travel, while still meeting the unique design constraints of high-speed train service. Through Technical Working Group meetings with local agency staff and direct discussions with individual local government officials and staff, the Authority and FRA have endeavored to develop a project design that minimizes local impacts and is made as consistent with local plans as possible. Consistent with CEQA and NEPA requirements, the project's consistency with local general plans and zoning regulations is discussed in the EIR in Section 3.13, Local Growth, Station Planning, and Land Use and further in Appendix 3.13-A. Where the project is inconsistent with the a local land use plan, Section 3.13, also contains a discussion of the extent to which the Authority would reconcile the Project with the plan as required by 40 CFR 1506.2(d).</p> <p>Some commenters have cited a federal statute, 43 USC § 1712(c)(9), in asserting that the Authority and/or FRA must "coordinate" with local agencies in planning the HST System. The term cited is used in a section of the Federal Land Policy and Management Act, which applies to lands under the jurisdiction of the U.S. Bureau of Land Management. The substantive requirement for coordination under this statute does not apply to the Authority or FRA. However, the Authority and FRA respect the role of local agencies and local government plans and policies, and have endeavored to minimize conflicts with local plans in the design of the HST System to the maximum extent feasible and consistent with the design requirements for this project. Through Technical Working Group meetings with local agency staff, direct discussions with individual local government officials and staff, and community groups the Authority and FRA have endeavored to develop a project design that minimizes local impacts. The Authority and FRA are committed to working cooperatively with local government agencies in the Fresno to Bakersfield section through project implementation.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-09: General Support of HST
<p>Several commenters expressed their general support for the HST</p>	<p>High-speed rail would bring significant benefits to California, both in the near term and in the long run. It would benefit individuals and the state as a whole. Benefits would be statewide and would encompass both economic and environmental</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-09: General Support of HST
Project. Benefits mentioned included economy, reduced congestion on roadways, and reduced pollution and related health benefits.	concerns. California's population is growing rapidly and, unless new transportation solutions are identified, traffic and congestion will only worsen and airport delays will continue to increase. The proposed 220-mph HST System would provide lower passenger costs than travel by air for the same city-to-city markets. It would increase mobility, while reducing air pollution, decreasing dependence on fossil fuels, and protecting the environment by reducing GHG emissions, and would promote sustainable development. By moving people more quickly and at lower cost than today, the HST System would boost California's productivity and enhance the economy. In November 2008, California voters passed Proposition 1A, which provides \$9 billion toward the implementation of HST service in California. For more information in regard to the rationale for building the proposed HST System, please see Section 1.2.4, Statewide and Regional Need for the HST System with the Fresno to Bakersfield Section. Further information is available in the Statewide Program EIR/EIS (Authority and FRA 2005).

Comment Summary	Response
GENERAL	FB-Response-GENERAL-10: Support of/Opposition to Fresno to Bakersfield Section Alternatives
Many comments expressed support for or opposition to either the BNSF or other alternatives, often based on specific impacts to properties, agriculture, or biological resources.	<p>Several comments either supporting or opposed to the Fresno to Bakersfield Alternatives included opinions regarding alignments following existing transportation corridors and concerns about impacts involving aspects such as displacements (businesses and homes), noise and vibration, transportation, agricultural lands, visual/aesthetic resources, and construction-related air quality impacts to specific properties or communities. Among some commenters, reasons for supporting a given alternative included economic benefits, such as jobs created from HMFs nearby and improvements in the communities from the construction and presence of the HST.</p> <p>Following existing transportation and utility corridors has been a foundational component of HST project planning commencing with the Statewide Program EIR/EIS process, continuing through the Bay Area to Central Valley Program EIR/EIS process, and continuing through the project level EIR/EISs. Proposition 1A also incorporates into the HST System performance criteria an emphasis on following existing transportation or utility corridors to the extent feasible, as determined by the Authority, as a mechanism to reduce impacts on communities and the environment (Public Utilities Code § 2704.09). The Authority and FRA have gone to great lengths to maximize the use of existing transportation corridors to minimize potential impacts on agricultural lands. However, this must be balanced with considerations of minimizing potential impacts on urbanized areas (typically, noise and residential and business displacements). Also, HST operations impose design requirements that do not always fit within the alignment of the existing transportation corridors and therefore cannot feasibly be built solely within those corridors (see also FB-Response-GENERAL-02). Many existing corridors are not sufficiently straight, nor are their curve radii long enough to support high-speed operation along their full lengths and in many cases cannot maintain the speeds necessary to meet the Prop. 1A travel time requirements. Consequently, a HST alignment following such a corridor would not be able to meet the project's purpose and need. Additionally, safety considerations dictate the need to separate the HST from roads and conventional rail (refer to Section 2.4.2.1, Alignment Requirements).</p> <p>The EIR/EIS provides an overview of the relative differences among physical and operational characteristics and potential environmental consequences associated with the HST north-south alignment alternatives and station locations. The</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-10: Support of/Opposition to Fresno to Bakersfield Section Alternatives
	<p>physical/operational characteristics included alignment, length, capital cost, travel time, ridership, constructability, and operational issues. The potential environmental impacts included transportation-related topics (air quality, noise and vibration, and energy), human environment (land use and community impacts, farmlands and agriculture, aesthetics and visual resources, socioeconomics, utilities and public services, hazardous materials and wastes), cultural resources (archaeological resources, historical properties) and paleontological resources, natural environment (geology and seismic hazards, hydrology and water resources, and biological resources and wetlands), and Section 4(f) and Section 6(f) resources (parklands, recreation areas, wildlife/waterfowl refuges, and historical sites).</p> <p>The Authority and FRA used the information in the RDEIR/SDEIS and input from federal, state, and local agencies and the public to identify the Preferred Alternative designated in this Final EIR/EIS. The Authority's and FRA's decision included consideration of the project purpose and need and the project objectives presented in Chapter 1, Project Purpose and Need, as well as the objectives and criteria in the alternatives analysis, and the comparative potential for environmental impacts. Within the preferred BNSF Railway Corridor for the Fresno to Bakersfield Section, alternative alignments were identified in the Hanford, Corcoran, Allensworth, Wasco-Shafter, and Bakersfield areas. The selection of the preferred alignment in any one of these areas is largely independent from the selection of the preferred alignment in the other areas. The preferred alignment in each of these areas combine to form the Preferred Alternative from Fresno to Bakersfield, which balances overall impact on the environment and local communities, cost, and constructability constraints of the project alternatives evaluated.</p> <p>The Final EIR/EIS evaluates 11 HST alignment alternatives: the BNSF Alternative, the Hanford West Bypass 1 Alternative, the Hanford West Bypass 1 Modified Alternative, the Hanford West Bypass 2 Alternative, the Hanford West Bypass 2 Modified Alternative, the Corcoran Elevated Alternative, the Corcoran Bypass Alternative, the Allensworth Bypass Alternative, the Wasco-Shafter Bypass Alternative, the Bakersfield South Alternative, and the Bakersfield Hybrid Alternative. The BNSF Alternative provides a continuous alignment between Fresno and Bakersfield; the other ten alternatives offer variations from that alignment.</p> <p>The EIR/ EIS also evaluates five station sites: the Kings/Tulare Regional Station-East Alternative, the Kings/Tulare Regional Station-West Alternative, the Bakersfield Station-North Alternative, the Bakersfield Station-South Alternative, and the Bakersfield Station-Hybrid Alternative in addition to the Fresno station site selected during approval of the Merced to Fresno Section of the HST System. Five HMF site alternatives are also evaluated: the Fresno Works-Fresno HMF, the Kings County-Hanford HMF, the Kern Council of Governments-Wasco HMF, the Kern Council of Governments-Shafter East HMF, and Kern Council of Governments-Shafter West HMF.</p> <p>The impacts of the alternatives in their 108 combinations are summarized in the Executive Summary (See Table S-2). A brief comparison of the relative impacts of the alternatives is available in Section S.8.3. Table S-4 discloses the impacts of the HMF site alternatives. The ten alignment alternatives that deviate from the BNSF Alternative were developed to reduce the environmental impacts of the HST project. The principal benefits and impacts of these alternatives relative to the BNSF Alternative are discussed in the EIR/EIS and briefly summarized below.</p> <p>The Hanford West Bypass 1 and 2 alternatives would run to the west of the city of Hanford. These alternatives convert fewer</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-10: Support of/Opposition to Fresno to Bakersfield Section Alternatives
	<p>acres of agricultural lands to nonagricultural uses. Because these alternative alignments would pass close to the communities of Grangeville and Armona, slightly more housing and business displacements and a larger number of sensitive noise receivers would be significantly impacted under these alternatives than under the BNSF Alternative. Also, these alternatives would affect a larger number of historically significant cultural resources than the BNSF Alternative.</p> <p>The Hanford West Bypass 1 and 2 Modified alternatives result in similar impacts as the Hanford West Bypass 1 and 2 alternatives, but were refined to avoid impacts to historically significant cultural resources in the area.</p> <p>The Corcoran Elevated Alternative would result in fewer residential and business displacements than the BNSF Alternative, and would be less disruptive of the roadway network in Corcoran. However, this Alternative would result in noise impacts on more sensitive receivers than the BNSF Alternative and would have a greater visual impact on residents of the community. The Corcoran Bypass Alternative avoids the city of Corcoran, resulting in fewer noise impacts on sensitive receivers, less effect on low-income and minority communities, less community disruption, and fewer business displacements than the BNSF Alternative. The Corcoran Bypass Alternative would convert more agricultural land to nonagricultural uses, and a greater loss of land protected under the Williamson Act than the BNSF Alternative.</p> <p>The Allensworth Bypass Alternative would avoid visual and noise impacts on Allensworth State Historic Park and the Allensworth Ecological Reserve which are both protected under Section 4(f) of the Department of Transportation Act of 1966. The Allensworth Bypass alternative would also reduce the acreage of jurisdictional waters permanently affected by the project. However, the Allensworth Bypass Alternative would convert more acres of farmland to nonagricultural uses, and affect more acres of Williamson Act land than the BNSF Alternative.</p> <p>The Wasco-Shafter Bypass Alternative avoids the communities of Wasco and Shafter, resulting in fewer noise impacts, fewer acres of waters of the United States effected, fewer low-income and minority communities affected, cause less community disruption, and result in fewer residential and business displacements. While the Wasco-Shafter Bypass Alternative would result in the conversion of fewer acres of agricultural land to nonagricultural uses, it would cause a greater loss of land protected under the Williamson Act than the BNSF Alternative.</p> <p>The Bakersfield South Alternative would avoid encroaching on the campus of Bakersfield High School, would have fewer associated residential and business relocations, and have a smaller property and sales tax revenue reduction than the corresponding section of the BNSF Alternative. However, a greater number of religious facilities would be displaced with the Bakersfield South Alternative than the BNSF Alternative.</p> <p>The Bakersfield Hybrid Alternative would also avoid encroaching on the campus of Bakersfield High School. While this alternative would require reduced speeds and impact the overall travel times, it would reduce the number of homes and religious facilities impacted in east Bakersfield compared to both the BNSF and Bakersfield South alternatives.</p> <p>Neighborhoods, particularly those near the urban HST stations, may experience increased vitality once the system is in operation in terms of improved access, residential infill, employment growth, and greater patronage of local business. The</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-10: Support of/Opposition to Fresno to Bakersfield Section Alternatives
	area around the HST stations could improve community cohesion because improvements in the area with the development of the stations could provide new meeting places for residents from the surrounding neighborhoods. However, as discussed in Section, 3.12.8. HST Alternatives, communities that are farther from the HST stations, including Fresno's Edison District, the Bakersfield Northeast and Northwest districts, and Corcoran would not experience these benefits. As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, the Kings/Tulare Regional Station sites are not proposed to be located at urban sites. The West alternative site is in line with urbanization trends in the Hanford area; the East alternative, however, is surrounded by agricultural land. Development of this station would reinforce the importance of Hanford as a transportation hub, but would not result in higher density development in the City's downtown and would potentially result in conversion of agricultural land. Moderate short-term effects from fiscal changes and agricultural displacement would result from the BNSF and the alternative alignments in unincorporated areas of all four counties.

Comment Summary	Response
GENERAL	FB-Response-GENERAL-11: Comments with Opinion Only
Some comments stated a person's opinion on the project, but not necessarily support or opposition for an alternative.	These comments present opinions on the project. CEQA and NEPA require a final EIR and EIS to respond to the responsible comments received on environmental issues (see 14 CCR §15088(a) and FRA Procedures for Considering Environmental Impacts 14(s)). The comments do not address an environmental issue but have been included in the Project's administrative record.

Comment Summary	Response
GENERAL	FB-Response-GENERAL-12: Impact of HST on Existing Amtrak Service
Some comments related to impacts associated with ending Amtrak service and how that would affect current users and employees. Commenters raised concerns over the loss of the Amtrak station in downtown Hanford, which relies on Amtrak to bring visitors and customers to downtown businesses. The City of Hanford is concerned that the loss of the downtown Amtrak station would adversely affect the economic viability of downtown and the City's related community investments.	<p>At full build out, the HST would operate separately from state supported Amtrak service. The decision whether to continue Amtrak service on the San Joaquin line (using existing BNSF infrastructure) is outside the purview of the Authority. The HST project includes no plans to discontinue Amtrak service to the Hanford station or any other Amtrak station/platform in the Fresno to Bakersfield area.</p> <p>As described in Section 3.2.5.3 of the EIR/EIS it is anticipated that the Amtrak San Joaquin rail service would be adjusted by the agencies that operate it to function as a feeder service to the HST System. Where the San Joaquin stops at more stations, it is anticipated that connecting service would be provided to maintain accessibility at or better than current service levels to Bakersfield and, as a feeder service, the San Joaquin line would be important in its support of new riders. As stated in the Revised 2012 Business Plan (Authority 2012a), the Initial Operating Segment (IOS) of HSR operations will include the Merced to Fresno and Fresno to Bakersfield sections of the HST System. Also as noted in the Revised 2012 Business Plan, HST passenger operations will begin with, as the first option, the completion of the IOS connections to the Los Angeles Basin. Amtrak provides service to the San Joaquin Valley from both the Bay Area and Los Angeles Basin. Amtrak's San Joaquin line can provide passenger rail service, as a feeder, to the IOS, and to the full HST System once operational.</p> <p>As discussed above, once the HST is in operation, Amtrak is likely to remain as a feeder service, both providing access to HST stations and train service between San Joaquin Valley cities that do not have HST stations. As discussed in Section 2.4.4.2 of the EIR/EIS, a Kings/Tulare Regional Station would include shuttle service to downtown Hanford as a part of that station's operation. As a result, downtown Hanford will continue to be readily accessible to train riders - whether arriving on the Amtrak line, or from the HST station. With regard to the Corcoran and Wasco Amtrak stations, although underneath elevated structures and originally anticipated to require relocation, the Corcoran Amtrak station and the Wasco Amtrak station and passenger platform would remain in place. No disruption to Amtrak service would occur. Please see Sections 3.2 and 3.16 for further discussion of the Corcoran and Wasco Amtrak stations.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-13: Analysis of Amtrak on Central Valley Sections
Several commenters inquired about initial construction in the Central Valley. Some comments asked "why not prioritize urban HST sections first and why spend the money in an area that would have low potential ridership?" Others comments asserted that it is unlikely that the HST project would be built out and used for	<p><i>Project Definition- Fresno to Bakersfield High-Speed Train Project</i></p> <p>The Authority and FRA are analyzing the potential beneficial and adverse impacts of the California HST statewide system using a tiered environmental review process (a detailed discussion of tiering is available at Standard Response FB-Response-GENERAL-01 and Section 1.5). As part of this process, FRA and the Authority published two programmatic environmental impact reports/environmental impact statements (EIR/EIS) in 2005 and 2008 (revised for CEQA purposes in 2010 and 2012). These programmatic EIR/EISs provided FRA and the Authority with the environmental analysis necessary for the evaluation of the overall HST System and for making broad decisions about HST corridor alignments and station locations for further study in second-tier EIR/EISs. The agency decisions following the 2005 programmatic document (as relevant to the Fresno-Bakersfield section) selected the HST alternative that is capable of speeds in excess of 200 mph, on a fully grade-separated</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-13: Analysis of Amtrak on Central Valley Sections
<p>high-speed train service due to funding constraints, and that the “real project” involves diesel trains on the new tracks in the Central Valley. These comments attested that the EIR/EIS should evaluate the effects of using Amtrak trains on the Central Valley HST tracks and recirculate the document for further public review and comment.</p>	<p>track with state of the art safety, signaling, and automatic train control systems and identified conceptual corridors, alignments, and station options to be carried forward for further consideration and analysis in subsequent project-level EIR/EISs generally to be done by project sections between station options (i.e., logical termini) identified at the program level.</p> <p>Following the programmatic EIR/EISs, the Authority and FRA divided the statewide HST System into logical project sections that will support operation of HST service between stations in large metropolitan population centers. Developing the entire HST System in this way will allow for a logical and efficient expansion from one independent project section to the next, such as Fresno to Bakersfield. International experience has shown that an HST system can be successfully built in sections over time, with each section attracting additional private investment, and need not be built immediately as a complete system in order to be successful (Revised 2012 Business Plan, pp. 2-30 to 2-34). Construction of large-scale infrastructure projects such as interstate highway systems or transit projects in phases is a common and widely accepted practice and is the standard project delivery method (see materials at http://www.fhwa.dot.gov/interstate/history).</p> <p>The Fresno to Bakersfield project’s definition is the section of the HST System between Fresno and Bakersfield and is the focus of the analysis in the EIR/EIS. This project definition is consistent with the Fresno to Bakersfield project’s purpose and need as described in Chapter 1.0. Fresno and Bakersfield are the two largest cities in the San Joaquin Valley. They are both surrounded by metropolitan areas and are economic hubs within the region. Given their potential ridership and regional economic importance, they are appropriate logical termini for a section of the HST System. The Fresno to Bakersfield project section is of substantial length at approximately 114 miles. Constructing this section results in two immediate benefits. First, the California HST System requires a section of approximately 100 miles of high-speed track to test the high-speed trains. High speed testing is crucial to demonstrating operating performance and gaining approval for the safe operation of the system. The relatively straight alignment in the Central Valley section would allow for the testing of track, signaling systems, and trainsets at operational speeds. Second, the Fresno to Bakersfield Section can be operated for HST service independent of other sections of the HST System.</p> <p><i>Funding Availability and the Initial Construction Section</i></p> <p>The Authority has started to identify the funding necessary to construct the statewide HST System and has decided to start construction and focus the currently-available funding in California’s Central Valley. The Authority has secured federal grant funding through the American Recovery and Reinvestment Act (ARRA) and the Transportation, Housing and Urban Development, and Related Agencies Appropriations Act for 2010 and the California legislature has appropriated state Prop. 1A bond funding for the project. Subject to the completion of the environmental processes, the Authority will use these funds to begin construction of the HST System in the Fresno-Bakersfield and Merced-Fresno sections.¹</p>

¹ The 2012 Business Plan also discusses the concepts of the Initial Operating Segment (IOS) and the Initial Construction Section (ICS). The IOS is the corridor connecting the Central Valley and Los Angeles that will be developed over time whereas the ICS (also referred to as the First Construction Segment (FCS) in the 2012 Business Plan) is the section completed with the funding currently available. The ICS is contained within the IOS, as identified in the 2012 Business Plan.

Comment Summary	Response
GENERAL	FB-Response-GENERAL-13: Analysis of Amtrak on Central Valley Sections
	<p>The Authority will invest the identified funds in some of the infrastructure necessary for HST operations including the construction of grade-separated track bed and track and required roadway modifications, as well as implementation of the associated environmental commitments and right of way and relocation costs. This initial construction is being designed to support eventual full high-speed operations consistent with the project description. Use of the currently-available funding will result in infrastructure extending from Avenue 17 near Madera (at the BNSF Railway (BNSF) tracks) to near Bakersfield in the south.</p> <p>The Project analyzed in the Final EIR/EIS is for the full HST operations for the HST System between Fresno and Bakersfield. However, it is possible that there will be a delay in securing the required additional funds necessary for full HST service. It is therefore possible that the infrastructure constructed as part of this project could be used by another transportation agency for interim operations. This approach is consistent with the Revised 2012 Business Plan and the FRA grant agreements both of which identify an interim service option (or interim use option or scenario) that could provide early operational benefits to the traveling public using the HST infrastructure. This option would allow for the potential introduction of Amtrak <i>San Joaquin</i> intercity operation using the HST infrastructure on an interim basis.²</p> <p>The diesel Amtrak <i>San Joaquin</i> interim use scenario on the ICS identified in the FRA grant agreement and the 2012 Business Plan is one representative example of a potential interim service option. This scenario for interim passenger service entails the thru-operation of existing Amtrak <i>San Joaquin</i> service by shifting some of these trains to/from the ICS/BNSF just south of the Madera Amtrak station and doing the same just north of Bakersfield. This would be done via cross-over track at these locations. This approach would allow a passenger to travel from Sacramento to Bakersfield with a type of “express” <i>San Joaquin</i> service that would travel at higher speeds and have a single stop in Fresno between Madera and Bakersfield. While some of the Amtrak <i>San Joaquin</i> trains would be diverted from their existing route, it is likely that others would continue to serve existing stations. The potential for interim Amtrak service is not inconsistent with the evaluation in the Fresno to Bakersfield EIR/EIS; rather, it is a way to phase in service on the infrastructure, the impacts of which would be within the range of impacts already evaluated and disclosed, as discussed below.</p> <p>As noted above, this is just one potential interim service option. Other potential interim service options could be developed as part of a larger statewide planning effort led by the California State Transportation Agency and involving other federal, state, and regional stakeholders. If the planning effort identifies a benefit for intercity passenger service using the ICS during the interval between the construction of the ICS and operation of full HST, then other potential interim service options could be developed, further analyzed and implemented by those stakeholders. The potential for interim service options does not change the Fresno-Bakersfield project or constitute alternatives to the Fresno-Bakersfield project. Furthermore, any interim</p>

² FRA’s grant agreement requires that the Authority provide some assurance that the result of FRA’s investment has “independent utility” or “operational independence” by demonstrating that even if no other portion of the HST System is constructed or if such other portions are substantially delayed, the infrastructure can be utilized to provide improved passenger rail service. See FRA’s High-Speed Intercity Passenger Rail (HSIPR) Interim Program Guidance (74 FR 29900, 29905 (June 23, 2009)). The interim use scenario satisfies this requirement.

Comment Summary	Response
GENERAL	FB-Response-GENERAL-13: Analysis of Amtrak on Central Valley Sections
	<p>service option, including Amtrak, would be implemented by another state agency, since the California High-Speed Rail Authority's statutory mandate is limited to the operation of a high-speed train system capable of sustained speeds of 200 mph. However, in response to comments regarding the interim use scenario identified in the 2012 Business Plan and the FRA grant agreement and in order to fully disclose an identified potential future interim use scenario, the potential impacts of this interim use option is summarized below and more detail is provided in Appendix 2-F.</p> <p><i>Summary of the Potential Impacts of Interim Use of the ICS As Compared to the Impacts to the Full HST Use</i></p> <p><u>Potential Construction Impacts of the Potential Interim Use Option Do Not Result In New or More Substantial Construction Impacts than Disclosed for the Whole Project</u></p> <p>The construction impacts for the diesel Amtrak <i>San Joaquin</i> interim service option would be the same or less than the impacts evaluated and disclosed in the 2012 Merced to Fresno Final EIR/EIS (Authority and FRA 2012f) and in the Fresno to Bakersfield Revised DEIR/Supplemental DEIS. In general, the additional infrastructure necessary to implement the interim use option (i.e. cross-overs connecting to the BNSF Railway) would be constructed completely within the footprint of the facilities evaluated in those two environmental documents. In the north, the cross-over track for the thru-service scenario would be constructed just south of the Madera Amtrak station, within the environmental footprint evaluated in the Merced-Fresno certified Final EIR/EIS. In the south, the cross-over track would be constructed within the footprint of the Shafter Heavy Maintenance Facility (HMF) site fully analyzed in the Fresno to Bakersfield Revised DEIR/Supplemental DEIS. Therefore, the construction period impacts of the Amtrak interim use scenario would be the same or less than the impacts described in the Merced to Fresno and Fresno to Bakersfield EIR/EIS documents.</p> <p>There may be minor additional construction activities necessary for the cross-over tracks, resulting in the possibility of a minor net addition of construction air emissions over what was evaluated in those environmental documents, but both documents require air quality mitigation in the form of offsets to a net zero level of actual emissions, so the net addition of emissions after mitigation would be zero.</p> <p><u>Potential Interim Use Option Does Not Result In New or More Substantial Operations Impacts Than Disclosed for the Whole Project</u></p> <p>The diesel Amtrak <i>San Joaquin</i> interim use option generally would have similar or lesser operations impacts than the whole project as evaluated in this Fresno to Bakersfield EIR/EIS and in the 2012 Final Merced to Fresno EIR/EIS (Authority and FRA 2012f). For most resource areas, operation of a short-term interim passenger rail service on the same track as the whole project, but with considerably less frequency, has incrementally fewer or no different impacts. Each resource area is evaluated below as to operation, for completeness.</p> <p>Transportation. This option for interim service would not create impacts to transportation/traffic different than those evaluated and disclosed in the Merced to Fresno and Fresno to Bakersfield environmental documents. Traffic from passengers arriving at/departing from the Fresno station would be expected to be less than for the full HST System because of lower</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-13: Analysis of Amtrak on Central Valley Sections
	<p>ridership anticipated for the interim use option. Related, benefits identified in the EIR/EIS from reduced regional congestion as inter-regional trips divert from auto to HST also would be lower, similar to such lower benefits in the early stages of full HST service as ridership ramps up.</p> <p>Noise and Vibration. For the noise analysis of the non-electrified interim use option, the noise level for the non-electrified passenger train was estimated to be 90 dBA Lmax at 100 feet throughout the length of the ICS. This noise level is based on 40 CFR 201 Section 201.12(b) requirements for maximum noise emission standards for interstate rail carriers rather than the lower expected noise emissions of such a train, so the estimate conservatively overstates noise as a reasonable upper limit. Using this noise emission level, noise levels were modeled at 409 receptor sites between Fresno and Rosedale in the Bakersfield metropolitan area that are representative of the range of sensitive receptors present along the full ICS. These receptor sites were residences and institutional facilities where people are sensitive to noise such as schools, churches, and rest homes. The same receptors used for the analysis of HST noise impacts were used for the non-electrified passenger train service. At all but one receptor, the noise projected for the HST would be greater than the noise projected for a non-electrified passenger train operating at 125 mph. At that one receptor, the noise projected for the HST and the non-electrified passenger train would be the same. Therefore, noise impacts to sensitive receptors along the ICS would be less for a non-electrified passenger train than for the HST.</p> <p>Ground-borne vibration impacts inside vibration-sensitive buildings are defined by the vibration velocity level, expressed in terms of VdB, and the number of vibration events per day of the same kind of source. The FRA provides guidelines to assess the human response to different levels of ground-borne vibration, as shown in Table 3.4-6 of the EIR/EIS. These levels represent the maximum vibration level of an individual train pass-by. A vibration event occurs each time a train passes the building or property and causes discernible vibration. "Frequent Events" are more than 70 vibration events per day, and "Infrequent Events" are fewer than 70 vibration events per day. For non-electric train use of the ICS, the infrequent events vibration criteria were used.</p> <p>A GIS analysis was conducted to calculate the number of sensitive receptors that would be impacted by Amtrak interim use of the ICS. Nine sensitive receptors would be impacted by such use, but such impacts would be less than significant after mitigation (such mitigation would be applied to the HST infrastructure (e.g., rubber mounts) on a receptor by receptor basis).</p> <p>Regional Air Emissions. The interim use option would not involve any net addition of diesel trains in the San Joaquin Valley, just a lateral movement of their travel. Accordingly, there would be no net change in regional emissions over existing conditions. Regional air quality and greenhouse gas benefits during any interim use period (from auto trip diversions to the cleaner HST) would be less than would be provided once the HST is fully operational and reaches mature ridership. Related, emissions from autos traveling to/from HST stations would be less than disclosed in the Merced-Fresno and Fresno-Bakersfield environmental documents.</p> <p>Localized Emissions/Health Risks. Diesel locomotives on the ICS would run in locations (a) directly abutting (although offset by approximately 100 feet) where the existing <i>San Joaquin</i> trains run (e.g., Madera Amtrak to just south of Cottonwood Creek where the HST tracks would turn directly south, and those portions of the Fresno/Bakersfield HST alignment that abuts</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-13: Analysis of Amtrak on Central Valley Sections
	<p>the BNSF alignment), (b) directly abutting where Union Pacific diesel trains run (i.e., through Fresno) and (c) in areas where no diesel trains currently run (i.e., where the ICS does not abut an existing diesel train track). As to (a), this represents negligible change from the existing condition because diesel use of the ICS would involve the same number of trains as run today. As to (b), this would represent adding diesel trains (i.e., their exhaust) in a location already experiencing diesel train exhaust. As to (c), this would represent adding a new local air emissions source.</p> <p>In any event, modeling shows as to all three of these areas that diesel use of the ICS would have a less than significant impact on health from these localized diesel emissions. The highest incremental increase in cancer risk and chronic non-cancer effects calculated for the non-electrified (diesel) passenger train would be to a hypothetical resident located within about 150 feet of the track who spent 70 years of their life 350 days/year, 24 hours/day at this location. The incremental increase in cancer risk at this point is 7.5 in a million, which is less than the significance threshold of 10 in a million. The increase in Hazard Index for chronic non-cancer effects is 0.0014 which is less than the significance threshold of 1. Other receptors located further away from the track have an even lower incremental increase in cancer and chronic non-cancer risk. Therefore, the use of the HST tracks by a non-electrified passenger train in the San Joaquin Valley would not have a significant health impact on sensitive receptors.</p> <p>Hazardous Materials and Wastes. A non-electrified passenger train would carry diesel fuel that could spill in the event of an accidental derailment. However, the use of non-electrified passenger trains on the ICS would not change the number of diesel trains operating in the San Joaquin Valley, it simply shifts the location of some of those trains from the BNSF Railway to the HST tracks. Where the HST tracks diverge from the BNSF Railway, they cross the same water courses and the same types of land uses as the BNSF; therefore, the nature of impacts associated with accidental spills would be the same for non-electrified passenger train service on the ICS as for existing Amtrak service. The potential for accidental diesel spills would be less for a diesel train operating on the ICS than existing Amtrak operations for several reasons. Based on a review of FRA rail accident statistics, a major cause of train accidents is collisions with vehicles at at-grade crossings. The potential for such accidents would be eliminated with the ICS since the tracks would be fully grade separated. Amtrak currently operates on freight rail tracks that are not built or maintained to the same standard as HST tracks. Therefore, derailments caused by poor track conditions are less likely to occur on the ICS than existing freight rail tracks.</p> <p>Safety and Security. The safety and security operation impacts for a non-electric train operating on the ICS would be the same or less than those described in Sections 3.11 of the Merced-Fresno FEIR/EIS and the Fresno-Bakersfield EIR/EIS. The existing San Joaquin service does not run on a fully grade-separated, dedicated track. Shifting five of those daily trains to the ICS would increase safety and security as compared to existing conditions by providing the added safety of a fully grade-separated, dedicated track. Design of the system would prevent conflicts with other trains, vehicles, pedestrians, and bicyclists and allow the trains to operate year-round under different weather conditions.</p> <p>Socioeconomics. The operational impacts from the potential interim use scenario would be less than for full HST operations, as would the benefits, due to lower ridership and fewer jobs – similar to the early stages of HST operations as ridership grows.</p> <p>Other Resource Areas Not Affected by Interim Use. Interim use of the infrastructure of the ICS would not have</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-13: Analysis of Amtrak on Central Valley Sections
	<p>additional impacts to the following resource areas because impacts to these resources result only from the construction of the HST System and the environmental footprints for the potential interim use option do not differ from those disclosed in the Merced-Fresno and Fresno-Bakersfield environmental documents. Operational characteristics of diesel use of the ICS would not have noise, air quality or other issues or impacts greater than HST use as already evaluated that would negatively affect these resources:</p> <ul style="list-style-type: none"> • Electromagnetic Fields and Electromagnetic Interference • Public Utilities • Biological Resources and Jurisdictional • Waters Hydrology and Water Resources • Geology, Soils and Seismicity • Station Planning, Land Use, and Development • Agricultural Lands • Parks, Recreation, and Open Space • Aesthetics and Visual Resources • Cultural and Paleontological Resources

Comment Summary	Response
GENERAL	FB-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)
<p>Many comments were submitted opposing the overall project, based on one or more reasons, including cost; funding; impacts on cities, counties, communities, farmland, agriculture, natural environment, wildlife and habitat, air quality, business, land access, and residential areas.</p>	<p>As discussed in Chapter 1 of the EIR/EIS, California's population is growing rapidly and, unless new transportation solutions are identified, traffic will only become more congested and airport delays will continue to increase. The proposed 220-mph HST System would provide lower passenger costs than air travel for the same city-to-city markets and service competitive with automobile travel. It would increase mobility while reducing air pollution, decreasing dependence on fossil fuels, protecting the environment by reducing GHG emissions, and promoting sustainable development in the areas near the stations, in comparison to existing trends. By moving people more quickly and at lower cost than today, the HST System would boost California's productivity and also enhance the economy. See the discussion under Section 1.2.4, Statewide and Regional Need, in the EIR/EIS.</p> <p>High-speed rail systems around the world cover their own operating costs through revenues, which is a key reason why 13 nations have built almost 10,000 miles of high-speed rail lines in the last few decades and why 24 countries are planning and building another 16,000 miles. The financial analysis of the California system, described in the Revised 2012 Business Plan, clearly demonstrates that the ridership and revenues are well able to cover the costs of operating the system, meaning that no operational subsidy would be required.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)
	<p>It is anticipated that HST Project will be financed through a combination of federal, state funds, and private funds. To date, the Authority has secured funding through FRA's High-Speed Intercity Passenger Rail Program and California Proposition 1A's Safe, Reliable High-Speed Passenger Train Bond Act adopted by state voters in November 2008. Through these funding sources, California has identified \$6.33 billion to invest in the development of its HST Project, including approximately \$3.5 billion in federal grant funds obligated through Cooperative Agreements with FRA. Use of Proposition 1A bond funds has been challenged in state court and the legal challenge remains pending. Additional sources of state funding have been identified in the form of Cap and Trade funds, but have not yet been appropriated as of the date of EIR/EIS publication.</p> <p><i>Employment Opportunities</i></p> <p>The EIR/EIS estimates that approximately 22,800 one-year full-time job equivalents would be created within Fresno, Kings, Tulare, and Kern counties over the entire construction period, depending on the alternative selected (Final EIR/EIS Section 3.12.8.2). The Authority estimates that permanent employment associated with the operation of the project in the four-county region would be approximately 47,500 jobs by 2035. This includes direct jobs to operate and maintain the project (approximately 2,300 jobs), indirect and induced jobs created to support these workers (approximately 3,200 jobs), and the additional jobs created as a result of the improved connectivity of the region to the rest of the state.</p> <p><i>Ticket Prices</i></p> <p>The Revised 2012 Business Plan includes a scenario of fares being set at 83% of anticipated airline fares. This follows the strategy of HST systems worldwide to set fares that are below those of airlines serving the same market and above the out-of-pocket driving costs in shorter distance travel markets. The appropriate fare level will take into account direct competition from air and road travel and system service costs. The ticket pricing structure is expected to be similar to that of an airline, with different classes of ticket as well as different price points depending upon the time and day of travel, how long travel is purchased before the departure date, how many stops the train makes, etc.</p> <p><i>Air Quality</i></p> <p>In the long-term, the HST would help improve air quality in the San Joaquin Valley air basin by reducing vehicle-miles traveled (VMT) in comparison to the No Project Alternative. Automobiles produce a major portion of the air pollutants generated within the air basin, and reducing VMT reduces these emissions. Over the long term (year 2035), the HST Project would result in smaller increases in motor vehicle emissions than would occur with the No Project Alternative, and these reductions, along with the Voluntary Emissions Reduction Agreement between the Authority and the San Joaquin Valley Air Pollution Control District, would offset any short-term emission increases associated with the construction of the HST System itself (refer to Section 3.3.6 of the EIR/EIS).</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)
	<p><i>Wildlife and Habitat</i></p> <p>All HST alternatives have both direct and indirect effects on wildlife habitat as well as associated special-status species of plants and wildlife. Effects are either direct during site preparation and construction or indirect through runoff, noise, motion, startle, and ongoing facility operation. During site preparation, plant communities, some of which comprise wildlife habitat elements, would be removed from the construction area (i.e., areas where track would be laid) prior to heavy construction activities. It is during this phase of the project that wildlife would be displaced or otherwise affected through the clearing, scraping, and removal of vegetation. The displacement of wildlife into the adjoining habitat would create increased pressures for survival as other individuals would compete for finite resources, which generally reduces the local populations due to the habitat reduction.</p> <p>The pre-project landscape contains existing restrictions to wildlife movement, such as SR 99 urban development and the BNSF and UPRR tracks. The BNSF Alternative and 6 of the other alternative alignments would have similar impacts on wildlife movement and habitats. The Allensworth Bypass Alternative would avoid impacts to the Allensworth Ecological Reserve and reduce the acreage of jurisdictional waters permanently affected by the project.</p> <p><i>Farmland</i></p> <p>Overall, the amount of land that would be removed from agricultural production in Fresno, Kings, Tulare, and Kern counties is a very small percentage of the four-county total land in production (see Section 3.14.5 of the EIR/EIS). The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). The Uniform Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Act, see Section 3.12 of the EIR/EIS and FB-Response-SO-01. The project must also adhere to California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Even so, there would be potential for temporary disruption to agricultural operations as production is reallocated between owners and as facilities are relocated. Related economic sectors, such as processing facilities, could also experience some short-term multiplier effects from reduced production.</p> <p><i>Agriculture Impacts</i></p> <p>The project would adversely affect individual farms and other agricultural operations. Construction of the HST System would result in disruption to or removal of existing infrastructure such as buildings and other structures, pumps and wells, reservoirs/tailwater ponds, irrigation systems (including distribution lines, canals, and gravity flow systems), power supplies, and access. These disruptions and removals would be, understandably, very important to individual farm owners and operators and, in extreme cases, could make the existing agricultural operation infeasible to continue.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)
	<p>The HST right-of-way would sever parcels, including parcels of agricultural land. Although some parcel severance is inevitable with any HST alignment, the Authority and FRA have made great efforts to minimize this impact through alignment selection, station locations, and careful project design. In some areas, severance would create small remnant parcels rendered uneconomic for farming operations. Typically, these remnants would be located between road rights-of-way and the HST alignment.</p> <p>The Authority is committed to working with agricultural property owners to resolve or mitigate, if possible, acquisitions that result in the division of farmlands. Design features include creation of a farmland consolidation program to sell these uneconomic remnant parcels to neighboring landowners (see Section 3.14.6, Project Design Features) and creation of overcrossings or undercrossings at reasonable intervals to preserve access across the HST right-of-way (see Mitigation Measure SO-MM#4 in Section 3.12.11 of the Final EIR/ EIS).</p> <p><i>Business Impacts</i></p> <p>Project construction would require acquisition and relocation of a number of businesses. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Act. The Uniform Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Act, see Section 3.12 of the EIR/EIS and FB-Response-SO-01. The project must also adhere to California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available on the Authority's website. It is anticipated that many of the jobs at these businesses would be relocated rather than lost. Section 3.12.8 of the Final EIR/EIS provides information about property acquisition impacts on businesses.</p> <p>Depending on the location of the construction activities and the nature of the activities, the impacts on businesses would vary. Business-related impacts would be more likely to occur near surface construction activities. Businesses that tend to rely on drive-by traffic to attract customers would experience the greatest impacts; however, some of these businesses may receive positive business impacts as construction workers buy goods and services in addition to regular customers. As described in Section 3.12.10 of the Final EIR/ EIS, the Authority will develop a relocation mitigation plan, in consultation with affected cities and counties, which will minimize the impacts on businesses during construction, including signage and maintaining access to the extent practicable, and providing relocation assistance (see Section 3.12.11 SO-MM#1, SO-MM#2, and SO-MM#3). In addition, other sections of the EIR/EIS identify mitigation measures related to noise (Section 3.4.7), dust (Section 3.3.7), and traffic (Section 3.2.7).</p> <p>Operation could also result in positive business impacts related to TOD in those areas where growth and higher densities are encouraged (i.e., Downtown Bakersfield and Downtown Fresno). The HST stations could act as a catalyst for TOD. Sections 3.12.8 and 3.13.5 of the Final EIR/ EIS provide additional information on the benefits for businesses.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)
	<p><i>Communities</i></p> <p>The BNSF Alternative would result in moderate to significant impacts on community interaction or community facilities, as identified in Section 3.12.8 of the Final EIR/EIS. The project would predominantly travel along or adjacent to existing major transportation facilities within the urban areas and would maintain through access and therefore minimizes the need to bisect neighborhoods. As described in Section 3.12.8 of the Final EIR/EIS, many communities in the study area developed around the railroad, which may have been the draw for development originally but has remained a dividing feature within the communities. Because the HST System would be grade-separated, it would provide safe and free-flowing connecting roads across the trackway. There is the potential for physical deterioration, primarily from the elevated guideways in urban areas. The Authority and FRA are working together to minimize and avoid effects leading to physical deterioration. Refer to Final EIR/EIS Sections 3.12.8 and 3.12.11, for complete information on community impacts and additional mitigation details, respectively. The HST Project would require property acquisitions along the borders of some neighborhoods, but these acquisitions would not affect overall neighborhood cohesiveness. After mitigation, impacts on these neighborhoods are expected to be minimal.</p> <p>The Corcoran Bypass Alternative avoids the city of Corcoran, resulting in less community disruption, and fewer business displacements than the BNSF Alternative. The Corcoran Bypass Alternative would convert more agricultural land to nonagricultural uses than the BNSF Alternative. The Wasco-Shafter Bypass Alternative avoids the communities of Wasco and Shafter, resulting in less community disruption, and fewer residential and business displacements. The Wasco-Shafter Bypass Alternative would result in a greater conversion of agricultural land to nonagricultural uses than the BNSF Alternative. Around the urban HST stations, the existing land uses are predominantly commercial and industrial; however, there are residential uses in close proximity that could be affected by station activities. The Kings/Tulare Regional station alternatives are not proposed to be located at urban sites and would potentially result in conversion of agricultural land. Please refer to Section 3.18, Regional Growth, and FB-Response-GENERAL-03 for a discussion of these station alternatives. Limits on parking in neighborhoods or business districts adjacent to the stations would be the responsibility of the city that has jurisdiction where the station lies. Parking is expected to be developed in phases over time, as demand increases and in response to development around the stations such as TODs, as well as future expansion of local transit links at multi-modal stations, that may reduce actual demand. Section 2.5.3 of the EIR/EIS explains how the Authority would take a flexible approach to providing the necessary parking at stations. Refer to EIR/EIS Sections 3.2 Transportation, 3.3 Air Quality, 3.4 Noise, and 3.10 Safety and Security for additional information on potential impacts in the station area and mitigation measures to reduce or avoid the impacts.</p> <p>The evaluation of impacts on neighborhoods and communities within the study area is provided in Section 3.12 of the EIR/EIS and in the Fresno to Bakersfield Section Community Impact Assessment Report (Authority and FRA 2012f) and FB-Response-GENERAL-05. This assessment considered the following key neighborhood and community issues: changes in neighborhood quality; barriers to social interaction in the analysis of potential impacts of the HST Project on neighborhoods, community</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-14: Oppose HST Project (e.g., Cost; Funding; Impacts on Cities, Counties, Communities, Farmland, Agriculture, Natural Environment, Wildlife and Habitat, Air Quality, Business, Land Access, and Residential)
	<p>cohesion, and community facilities; impacts on community facilities; and impacts on public services, safety, and security. In addition, the Community Impact Assessment provides a demographic analysis with complete race, ethnicity, income, and housing characteristics for socioeconomics, communities, and environmental justice.</p> <p><i>Growth</i></p> <p>Population growth is anticipated to increase in the Central Valley even without the HST System. The growth inducement analysis in Section 3.18 of the EIR/EIS shows that in Fresno, Kings, Tulare, and Kern Counties, the HST alternatives are projected to induce about 2-3% more total population and create about 3% more total jobs by 2035 than would occur under the No Project Alternative (refer to Table 3.18-18 in the EIR/EIS). The HST would help provide employment opportunities in an area of high unemployment and would encourage more compact growth around the proposed stations at greater intensities than currently exist.</p> <p>Land use is highly dependent on transportation facilities because enhancing access leads to higher attractiveness for commercial land uses. The HST System is not like a freeway with multiple on- and off-ramps; access would be limited to the stations. So, despite passing through rural areas, the HST would not provide direct access to those areas. The project would provide opportunities to encourage more compact development around the urban stations and redirect development growth to central cities, in conjunction with the SB 375 regional efforts and future plans of the cities of Fresno and Bakersfield, and would reduce the pressure for the future conversion of farmlands by encouraging new investments in urbanized areas, rather than in peripheral areas. However, the Kings/Tulare Regional Station would be located outside Hanford and would provide an economic incentive for new development outside the city center. Although the project would provide for access to downtown from the station and includes a program to support agricultural preservation through conservation easements, it is likely that this station would result in agricultural conversion.</p> <p>For more information regarding growth related to the HST System, please refer to Section 3.18, Regional Growth, and FB-Response-GENERAL-03.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-15: HMF Decision
<p>A number of comments were received either supporting or opposing a specific HMF location, or requesting that a specific location be dropped from consideration.</p>	<p>As discussed in Chapter 2 of the Fresno to Bakersfield EIR/EIS, all environmental impacts for potential HMF sites in the Fresno to Bakersfield section have been evaluated in this EIR/EIS to inform the public and agency decision makers of the potential impacts of the HST project. However, because only one HMF site will be required for the HST System and that site may be located in adjacent project sections, it is premature to identify a Preferred Alternative HMF site at this time. The HMF decision can be made separately from the identification of the preferred alignment and station alternatives in this Fresno to Bakersfield EIR/EIS. A decision on the HMF site will be made sometime after environmental review is complete for both the Fresno to Bakersfield section and the Wye area near Chowchilla (the Wye area is being evaluated on a supplemental basis via a Subsequent EIR/Supplemental EIS to the certified 2012 Merced to Fresno Section EIR/EIS). To support this future decision, additional comparative study, design, and review may be necessary. Subsequent review and study may include further design development.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-16: Public Outreach
<p>A number of comments were concerned with the public involvement process and suggested that the outreach was not adequate for a project of this size and scope. Some were specifically concerned about outreach to environmental justice populations.</p>	<p>Pursuant to the requirements of NEPA and CEQA, the Authority and FRA have conducted an extensive public and agency involvement program as part of the environmental review process. Public involvement and outreach included informational materials, such as fact sheets, informational and scoping meetings (including town hall meetings), public and agency meetings, meetings with individuals and groups, as well as presentations and briefings to interested and/or impacted organizations and associations.</p> <p>Agency involvement included agency scoping meetings, an Interagency Working Group, meetings with agency representatives, and other agency consultation.</p> <p>Public and agency outreach included notification and circulation of the Draft EIR/EIS. Chapter 8 of this Final EIR/EIS (Public and Agency Involvement) describes the public and agency involvement efforts conducted during the preparation, and after publication, of the Draft EIR/EIS. Table 8-1 lists the agency and public meetings held as part of the Authority's outreach efforts, during and after scoping, and during preparation of the Fresno to Bakersfield Section EIR/EIS. In addition, a Hanford project office was opened in downtown Hanford. It was staffed 4 days a week with one to two outreach and/or project engineers and remained open through the release of the RDEIR/SDEIS and the public comment period. The office made hard copies of the Draft EIR/EIS and related materials, including maps, available for the public to review, and staff were available to answer questions about the documents. The Hanford project office hosted two educational seminars to further engage stakeholders on project topics. The office was closed in February 2013 and moved to Fresno.</p> <p>Public meetings were announced through direct mail to those in the project database, advertisements in local newspapers, email notices, and postings on the Authority's website (http://www.hsr.ca.gov). Notifications of public meetings were posted in newspapers that have general circulation in areas potentially affected by the proposed project. Direct mailed notices for public meetings were in English and Spanish or contained a toll-free phone number for Spanish speakers to call. Emailed notices for public meetings were in English and Spanish. The email distribution list initially included several hundred addresses and grew to over 4,000. The mailing list included approximately 25,000. To ensure outreach to potentially impacted residents, landowners, tenants and stakeholders, the database includes all individuals whom have requested information, participated in a meeting or workshops, or individuals/organizations we proactively sought to meet with.</p> <p>In addition, the mailing list was based on County assessor data and was designed to reach as many potentially interested members of the public in the Fresno to Bakersfield section as possible including all owners and occupants within a 300 feet buffer of the construction footprint. Upon the release of the RDEIR/SDEIS, the Authority and FRA expanded that buffer to a quarter-mile in the rural subsection (South Fresno County through Kings County) of proposed alignments, and all others within 1,000 feet of the alignment (North Fresno and through Kern County). A toll-free phone number in English and Spanish was established to field questions or information requests. The toll-free number was included on handouts and materials distributed at public meetings. Spanish language interpreters were available at the Public Information Meetings and Draft EIR/EIS Hearings. The provision of Lao and Hmong language interpreters was offered in public notice materials prior to meetings. These public meetings included:</p> <ul style="list-style-type: none"> January 19, 2010 - Fresno to Bakersfield Section, Public Information Meeting

Comment Summary	Response
GENERAL	FB-Response-GENERAL-16: Public Outreach
	<ul style="list-style-type: none"> • March 16, 2010 - Fresno to Bakersfield Section, Public Information Meeting (Merced to Fresno Section supporting) • July 14, 2011 - Authority Board Meeting • August 23, 2011 - Public Information Workshop, Rosedale • August 24, 2011 - Public Information Workshop, Wasco • August 25, 2011 - Public Information Workshop, Corcoran • August 30, 2011 - Public Information Workshop, Fresno • September 20, 2011 - Draft EIR/EIS Public Hearing, Fresno • September 21, 2011 - Draft EIR/EIS Public Hearing, Hanford • September 22, 2011 - Draft EIR/EIS Public Hearing, Bakersfield <p>The following opportunities were provided in leading up to and in conjunction with release of the RDEIR/SDEIS for review:</p> <ul style="list-style-type: none"> • May 15, 2012 - Public Information Workshop, Shafter • May 16, 2012 - Public Information Workshop, Rosedale • May 17, 2012 - Public Information Workshop, Bakersfield • May 22, 2012 - Public Information Workshop, Fresno • May 23, 2012 - Public Information Workshop, Hanford • May 24, 2012 - Public Information Workshop, Corcoran • August 13, 2012 - Public Information Workshop, Bakersfield • August 14, 2012 - Public Information Workshop, Wasco • August 15, 2012 - Public Information Workshop, Corcoran • August 16, 2012 - Public Information Workshop, Fresno • August 27, 2012 - RDEIR/SDEIS Public Hearing, Bakersfield • August 28, 2012 - RDEIR/SDEIS Public Hearing, Hanford • August 27, 2012 - RDEIR/SDEIS Public Hearing, Fresno <p>Various publications and materials were developed in English and Spanish and made available at public meetings and the Authority's website, including the Fresno-Bakersfield High-Speed Train Fact Sheet, Fresno to Bakersfield Frequently Asked Questions, "Your Property, Your High-Speed Rail Project," and the Permit to Enter fact sheet regarding field studies for various environmental disciplines. In addition, the Authority website includes information about HSTs, the proposed HST route, the Authority's Revised 2012 Business Plan (Authority 2012a), newsletters, press releases, board of directors meetings, recent developments, status of the environmental review process, Authority contact information, and related links.</p> <p>During scoping and beyond, the development of the reasonable range of alternatives and many of the studies supporting the EIR/EIS can be traced to public comments. The Hanford West Bypass and Bakersfield Hybrid alternatives are examples of how public input shaped the scope of study. Both were developed in response to comments received during the Draft EIR/EIS review. More fine-tuned changes have also occurred in the design development in response to concerns about avoiding impacts to churches and schools in Bakersfield.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-17: Funding and Project Costs
<p>Many comments were received regarding increases in project cost and concern that sufficient funding will be available. Many of these comments were also concerned about the desirability of spending large amount of money during the current economic downturn and about the ability of local, state and federal governments to afford to fund the project.</p>	<p>Historically, federal funds have supported approximately 50% to 80% of many major transportation investments, including highway, transit, and aviation sector-related projects. This means although California's high-speed rail program is much larger than most individual transportation projects, there is precedent for substantial federal support for large and nationally significant transportation programs.</p> <p>California has been extremely successful in obtaining federal high-speed rail grants, obtaining close to 40% of the approximately \$10 billion of federal High-Speed and Intercity Passenger Rail grant funds available for the country as a whole. This initial federal funding allows California to move forward with the first step in the high-speed rail program. The Passenger Rail Investment and Improvement Act (PRIIA) of 2008 (www.fra.dot.gov/downloads/PRIIA%20Overview%20031009.pdf) established the framework for the national high-speed rail and intercity passenger rail program. Using PRIIA as a framework, in February 2009, Congress appropriated through the ARRA an investment of \$8 billion for new high-speed and intercity passenger rail grants.</p> <p>Congress continued to build upon this ARRA funding by making available, through the Fiscal Year 2010 Appropriations, an additional \$2.1 billion, bringing the total program funding to \$10.1 billion. In 2011 Congress rescinded \$400 million of that FY 10 funding. As a result, California's high-speed rail program has received \$3.5 billion or 34% of these federal funding sources. Of this amount, slightly more than \$3.3 billion is committed to constructing the Central Valley sections. This, combined with funding from Proposition 1A, would provide the estimated \$6 billion needed to build the Central Valley backbone. The federal funding has come in multiple waves, as follows:</p> <ul style="list-style-type: none"> • January 2010 - ARRA award of \$ 1.85 billion + state match (50%) of \$ 1.85 billion = \$ 3.7 billion • October 2010 - FY 2010 High-Speed and Intercity Rail award of \$ 715 million + state match (30%) of \$ 306 million = \$ 1.02 billion • December 2010 - ARRA reallocation from states of Wisconsin and Ohio, \$ 616 million + state match (50%) of \$ 616 million = \$ 1.234 billion • May 2011 - ARRA reallocation from state of Florida, \$ 300 million + state match (20%) of \$ 375 million <p>The High-Speed Intercity Passenger Rail Program has been the single largest source of federal grant funding for high-speed rail. The program was developed to provide funding to new or improved high-speed or intercity passenger rail service. These project grants have the effect of delivering transportation, economic recovery, livable communities, and certain project success factors.</p> <p>According to the International Union of Railways, HST systems around the world achieve positive operating revenues (refer to the Revised 2012 Business Plan, page 1-12).</p> <p>Availability Payments (APs) are multi-year funding commitments in which a government undertakes to make annual payments to a private party that agrees to construct, maintain, and finance infrastructure, provided the asset meets certain specified</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-17: Funding and Project Costs
	<p>performance standards over the contract period. AP mechanisms have been used for high-speed rail projects in France and are planned in Portugal, as well as many other types of infrastructure projects in other European countries. In each case, the central governments have entered into long-term contracts with private companies to finance, deliver, and operate infrastructure assets.</p> <p>European high-speed rail projects use the AP approach in conjunction with a design-build-finance-maintain structure. The APs compensate the infrastructure service provider for its delivery of the infrastructure, its ongoing performance to maintain it, and the cost to repay debt and equity financing of the infrastructure construction costs. In this regard, an AP approach can be viewed as both a procurement method and a financing tool that can be useful to accelerate private-sector capital investment.</p> <p>Project cost estimates for the Fresno to Bakersfield Section of the HST System are included in Chapter 5 of the EIR/EIS. The cost of the statewide HST System has been evaluated in the Revised 2012 Business Plan, which was made available to the public on April 2, 2012. The current cost estimate has increased significantly since the last estimate in 2009, which was based on the programmatic conceptual design. That estimate, covering the Full Phase 1 between San Francisco and Los Angeles/Anaheim, was \$36.4 billion in 2010 dollars. The Revised 2012 Business Plan estimate (in cumulative year of expenditure costs) is \$31.3 billion for the IOS, \$51.2 billion for the Bay to Basin system, and \$68.4 billion for the Full Phase 1 blended system. A substantial portion of this increase is for additional viaducts, tunnels, embankment, and retaining wall/trenches directly attributable to changes in scope and alignment based on stakeholder input, environmental necessity, and improved knowledge of site conditions. To assess the reasonableness of the program's cost estimates, the Authority studied the most recent cost estimates against those of other operational high-speed rail projects. These include worldwide costs evaluated by the World Bank and improvements to the Northeast Corridor proposed by Amtrak. Of note, a cost comparison of different high-speed rail projects can only provide an order of magnitude indication of the current estimate's reasonableness for the California program because every project has its own set of unique physical, environmental, and policy issues. This is particularly the case with European and Asian high-speed rail programs, built in different political and environmental settings.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-18: Employment Opportunities
<p>A number of comments were received requesting information on employment opportunities related to construction and operation of the project. Many also mentioned conducting specific outreach to minority businesses and communities and low-income communities.</p>	<p>The various alternatives are projected to employ substantial numbers of people and result in substantial induced employment within the area during years 1 through 5 of the construction phase (refer to Section 3.18.5, Regional Growth of the EIR/EIS). The Authority is contracting, through an open and transparent competitive bidding process, with private-sector engineering, architectural, and construction firms to complete the final design and construction of the system. Design and construction would occur with oversight by the Authority.</p> <p>Pursuant to Mitigation Measure SO-MM#6, the Authority will develop special recruitment, training, and job set-aside programs to ensure that study area minority and low-income populations are able to benefit from the project's job creation (refer to Section 3.12.12 of the Final EIR/EIS). Approximately 85% of the cost of California's HST System represents capital construction and related work, which will occur where the project footprint is located.</p> <p>The Authority will work with local job training programs in San Joaquin Valley communities well in advance of planned advertisement of construction contracting opportunities to ensure that funding is available for construction job training and contracting for project the area. With Construction Package 1 of the Merced Fresno Project, the Authority coordinated with Fresno Works and the City was able to secure a federal grant specifically to fund on the job training for high-speed rail construction. The Authority has convened workshops for community based organizations that are located from up and down the Central Valley about how to apply for federal grants to fund on-the-job training. Two of these community based organizations created a joint venture, applied for a grant, and was awarded \$300,000 to fund on-the-job training for high-speed rail construction jobs.</p> <p>As a federal- and state-funded project, the Authority's contracts must be compliant with the Davis-Bacon Act and related statutes and the U.S. Department of Labor Office of Federal Contract Compliance Program. These federal laws require contractors and subcontractors to pay their laborers and mechanics employed under the contract no less than the State's prevailing wages and fringe benefits for corresponding work on similar projects in the area as determined by the U.S. Secretary of Labor. Moreover, for contracts in excess of \$100,000, contractors and subcontractors must also, under the provisions of the Contract Work Hours and Safety Standards Act, as amended, pay laborers and mechanics, including guards and watchmen, at least one and one-half times their regular rate of pay for all hours worked over 40 hours in a workweek.</p> <p>As a federal- and state-funded project, the Authority's contracts for construction activities will include small business and minority business goals. The HST Project will adhere to all state and federal goals for small business, disadvantaged business enterprises, and disabled veteran enterprises. Additionally, the Authority's Board of Directors will consider policies on business goals. The Authority has adopted procurement rules that will govern Disadvantaged Business Enterprise/Small Business participation. In December 2012 the Authority approved a Community Benefits Policy (CBP) that supports employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. The CBP helps to remove the barriers of finding qualified workers, including small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the High-Speed Rail system. Under the Authority's CBP, design-build construction contracts will adhere to the National Targeted Hiring Initiative, which states a minimum of 30 percent of all project work hours shall be performed by national Targeted Workers and a minimum of 10 percent of National Targeted Workers hours shall be</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-18: Employment Opportunities
	performed by disadvantaged workers. According to the National Targeted Hiring Initiative, disadvantaged workers either live in an economically disadvantaged area or face any of the following barriers to employment: being homeless, a custodial single parent, receiving public assistance, lacking a GED or high school diploma, having a criminal record or other involvement with the criminal justice system, chronically unemployed, emancipated from the foster care system, being a veteran, or an apprentice with less than 15 percent of the required graduating apprenticeship hours in a program.

Comment Summary	Response
GENERAL	FB-Response-GENERAL-19: EIR/EIS Economic Benefits Assume Completion of Statewide Project
Some comments stated that the benefits of the project would not be experienced unless the entire statewide project is constructed.	<p>The Revised 2012 Business Plan (Authority 2012a) describes the Authority's plan for the long-term development of the blended HST System, using a combination of federal, state, regional/local, and private financing. The Authority has been working with rail representatives from Great Britain, Belgium, France, Germany, Korea, China, Japan, Italy, and Spain to understand the business models that have been used for the development of high-speed train service throughout the world.</p> <p>Based on the Authority's research, international experience has shown that HST systems make money from their operations and do not require government subsidies to cover those costs. To the contrary, they earn sufficient operational profits to attract private investments in various components of the system, including operations. For example, two high-speed rail sections, the Paris-Lyon Train a Grande Vitesse (TGV) route in France and the Tokyo-Osaka route in Japan, have fully covered both their infrastructure and operating costs after 15 years of service (Authority 2012). In many instances they earn sufficient operational profits to attract private investments in various components of the system, including infrastructure and equipment. Additionally, international experience has shown that HST systems are successfully built in sections over time, and need not be built immediately as a complete system in order to be successful. This international experience demonstrates that a section such as Fresno to Bakersfield can be a part of an HST system that is initially only partially in service and is eventually extended from the Bay Area to the Los Angeles Basin, as envisioned since 1996 with the establishment of the Authority.</p> <p>The blended approach described in the Revised 2012 Business Plan divides the HST program into a series of discrete projects that build upon each other, but also provide viable high-speed rail service independently. This will include advance investments in regional and local rail systems that will be integrated with the HST to leverage existing infrastructure and rights-of-way and benefit travelers by providing interconnecting, blended services.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-20: Improper Piece-mealing of Statewide Project
<p>Some comments expressed concern that the project has been piece-mealed, or broken into smaller pieces to avoid disclosing the impacts of the entire project.</p> <p>Some comments expressed the concern that selection of the Bakersfield station location would presuppose the alignment that will be selected east of the station.</p>	<p>The comment suggests that the project and the EIR/EIS have been piece-mealed or segmented (i.e., split into small parts) in violation of CEQA and NEPA. The Authority and FRA disagree. The 800-mile statewide HST System was divided into eight project sections after the Authority and FRA selected alignment corridors and station locations for most of the Statewide HST System after the Program level EIR/EIS was completed. Each project section contains stations at the endpoints, as logical termini, which permits each project section to be evaluated independently under both federal and state law. The law recognizes the impracticality of evaluating, at a project-specific level, the entire 800-mile HST System. The Fresno-Bakersfield section was not impermissibly piecemealed from other sections of the statewide HST System. Moreover, where a Fresno-Bakersfield project element could have impacts beyond the precise station endpoint, the EIR/EIS evaluates such impacts. For example, the EIR/EIS expanded its analysis of the Fresno to Bakersfield section's impact on East Bakersfield. The study area was extended east from the alternative Bakersfield station sites to Oswell Street, where the alternative alignments converge in order to ensure that the potential impacts of selecting any of the three station sites are disclosed. The impacts of the HST project east of Oswell Street will be analyzed in the Bakersfield to Palmdale EIR/EIS.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-21: Project Description Level of Detail
<p>Commenters questioned the level of detail of the HST Project, suggesting that the evaluation was inadequate if the design has not fully considered the full operational and construction elements of the project.</p>	<p>The Authority and FRA disagree with comments that the project is described with a level of detail insufficient for adequate identification of impacts and mitigation. In general terms, the comments suggest that the project must be engineered to the level of advanced or even final construction documents, which is the last step prior to commencement of actual construction, in order for CEQA/NEPA analysis to be conducted. However, CEQA and NEPA do not require full design prior to completing the environmental analysis, and in fact counsel against it. "EIRs should be prepared as early in the planning process as possible to enable environmental considerations to influence project, program or design," Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 395. Similarly, NEPA analysis should be conducted "at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts," 40 CFR § 1501.2. Under either statute, a description of a proposed project and project alternatives in an EIR/EIS should be brief, but sufficient detail must be available to fully analyze environmental impacts and propose mitigation measures.</p> <p>The Fresno to Bakersfield EIR/EIS meets NEPA and CEQA requirements for level of detail in the proposed action. Chapter 2 provides a general description of infrastructure requirements for the high-speed train, with representative drawings and photographs, followed by a more detailed narrative and mapped description of the location of infrastructure along the alignment alternatives, and at the station and HMF alternative sites. The reader is referenced to design drawings in Volume III, which in turn generate a project footprint shown in Appendix 3.1-A of Volume II. These components provide sufficient information to describe the alternatives and sufficient information to fully analyze environmental impacts.</p> <p>The EIR/EIS takes a conservative approach by identifying a footprint area within which project construction would occur and permanent structures would be placed. The EIR/EIS then evaluates impacts as if the entire footprint area would be adversely</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-21: Project Description Level of Detail
	<p>impacted by the project. When completely designed, the project would not impact every square inch of this footprint area, but would only impact some portion of it, depending upon the precise location within the footprint, as determined in final engineering for the project's elements and the construction approach taken. Accordingly, the EIR/EIS's approach is conservative and ensures that the full range of potential construction or permanent impacts were analyzed. This approach also provides flexibility for final engineering designs to incorporate mitigation measures and other design refinements to further reduce environmental impacts, as identified through the EIR/EIS process.</p> <p>The project footprint that would be affected permanently or just during construction can be found in Appendix 3.1-A of the EIR/EIS. Final construction, and construction and staging areas, would be located within the evaluated construction footprint. The construction footprint is based on the preliminary engineering design drawings, which were made part of the EIR/EIS in Volume III (Alignments and Other Plans). These design drawings and associated footprint contain the project description elements that commenters suggested were not contained in the RDEIR/SDEIS. This includes new electric utility lines to power the HST and upgraded PG&E switching stations to bring electricity to the project. Easements for new power lines required to supply power to HST systems sites, as well as relocations of existing power lines that would be directly affected by implementation of the FB Section project, are evaluated in the EIR/EIS. The impact areas associated with these easements and relocations are based on information available at the time of the EIR/EIS preparation. However, the respective utility companies will develop final relocation and upgrade plans for their utilities at a later stage of design. For example, upgrades to existing power lines may or may not include installation of new power line support structures and/or relocation of support structures or underground lines. If final relocation or upgrade designs related to the HST project affect properties not included in the project footprint evaluated in the FB Section EIR/EIS, additional environmental compliance would be required before those designs could be implemented. The design includes stormwater drainage necessary to accommodate the project. Regarding new or modified bridges, the footprint includes staging for the bridge abutments and the crossing structure. These design drawings and footprint documents also show roadway and freeway changes (e.g., closures, new interchanges and overpasses and/or modifications, etc.) necessary to accommodate the project; these changes also are identified and described in Appendix 2-A, which is listed in the EIR/EIS Table of Contents. The potential impacts of all these items were evaluated in the RDEIR/SDEIS and Final EIR/EIS, including for example, the potential air quality and biological impacts associated with constructing the roadway modifications necessary for the project. These items were included in the project description that was analyzed.</p> <p>Potential environmental impacts that relate to HST operations (e.g., running trains), rather than track construction and permanent facilities placement, were based on an Operations and Service Plan that is referenced and discussed in Chapter 2 of the EIR/EIS (and included as Appendix 2-C) and includes information such as anticipated trains per hour.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-22: Justifying the Baseline of Study
<p>Some comments were received suggesting that not enough baseline information was collected for the EIR/EIS analysis, or that the project alternatives were compared to the No Project Alternative instead of existing conditions.</p>	<p>The RDEIR/SDEIS includes a thorough description of existing physical conditions as the environmental baseline for analysis. As discussed in each impact analysis chapter, the existing conditions data was based on on-site surveys (e.g., biological resources, wetlands, cultural resources) and data collection (e.g. transportation, air quality, EMI/EMF, noise and vibration, geology and soils, agricultural land/soils). The EIR/EIS evaluated all impacts against existing conditions and proposed associated mitigation measures for significant adverse impacts.</p> <p>In addition, to fully understand and analyze impacts for some resource areas - transportation and air quality, for example - the EIR/EIS additionally evaluated impacts against anticipated future pre-project conditions and proposed associated mitigation. Disclosing impacts and mitigation using both baselines is authorized in the recent case of <i>Neighbors for Smart Rail v. Exposition Metro Line Construction Authority</i> (2013) 57 Cal. 4th 439.</p> <p>The traffic and air quality analyses disclosed impacts under both baselines. The RDEIR/SDEIS disclosed potential impacts, and mitigation against both baselines was clearly identified and described in the transportation section (see Section 3.2.3) and in the air quality section (see Section 3.3.3).</p> <p>Regarding agricultural land impacts, the EIR/EIS section on agricultural land does not utilize a future-conditions baseline to evaluate the project's potential to convert important farmland. All calculations of potential farmland conversion are based on existing farmland at the present time as the baseline. Section 3.14, Agricultural Lands, of the EIR/EIS does, separately, include a qualitative discussion of how the project compares to the No Project Alternative - a discussion required by the alternatives-comparison requirements of CEQA and NEPA.</p> <p>Regarding establishment of baseline conditions for biological impacts, and associated issues related to surveys, see FB-Response-BIO-03.</p>

Comment Summary	Response																								
GENERAL	FB-Response-GENERAL-23: HST Ticket Fares																								
Commenters asked about HST ticket fares, how much it would cost to ride the HST, and how tickets would be purchased.	<p>The EIR/EIS does not identify a specific high-speed train ticket price. For environmental analysis purposes, as explained in Chapter 2, ticket prices that correlated with 83% of air fare and 50% of air fare were utilized as a component of generating ridership forecasts, from which environmental impacts and benefits were calculated.</p> <p>The fares in the Revised 2012 Business Plan were assumed at levels "to maximize passenger revenues and the net cash-flow from operations" (Authority and FRA 2012a, p. 5-11). This so-called "83% of air fare" HST fare corresponds to the high end of the range of fares in the EIR/EIS. The EIR/EIS also examined the impacts of lower fares that would attract more riders while continuing to avoid operating subsidy (so-called "50% of air fare" HST fares).</p> <p>Additionally, as is the case with high-speed rail service around the world today, and is the case with airfares as well, California high-speed rail fares will vary by the following:</p> <ul style="list-style-type: none">• Time of day - Peak vs. off-peak• Class of service - First class vs. coach• Travel time - Express/limited-stop vs. "making all stops" service• Timing - How far in advance tickets are purchased <p>Just as with flying today, high-speed rail travelers with more flexible schedules or limited budgets could save money by booking well in advance or traveling in the middle of the day when trains are less crowded. Travelers who have to make last-minute bookings and need to take express trains or travel during peak periods will typically pay a higher fare. At this time, the Authority has not determined the method nor begun the procurement/acquisition of the reservation system for HST. This will occur in adequate advance of the system beginning revenue service.</p> <p>The table below shows the average fare used in forecasting, at both the 50% and 83% levels, and how fares might vary around the average.</p> <p>Examples of HST Fares at 50% and 83% levels (2010\$):</p> <table><tr><th>Station to Station</th><th>Buy-ahead, Off-peak, and/or Multi-stop Train</th><th>Average Fare assumed in Forecasts</th><th>Last-minute, Peak, and/or Express Train</th></tr><tr><td>San Francisco-Los Angeles</td><td>31 - 52</td><td>48 - 81</td><td>74 - 123</td></tr><tr><td>San Jose-Anaheim</td><td>31 - 52</td><td>48 - 81</td><td>74 - 123</td></tr><tr><td>Fresno-Millbrae</td><td>25 - 41</td><td>38 - 64</td><td>58 - 97</td></tr><tr><td>Sacramento-Fresno</td><td>27 - 45</td><td>43 - 71</td><td>64 - 107</td></tr><tr><td>Los Angeles-Kings/Tulare</td><td>25 - 42</td><td>40 - 66</td><td>60 - 100</td></tr></table>	Station to Station	Buy-ahead, Off-peak, and/or Multi-stop Train	Average Fare assumed in Forecasts	Last-minute, Peak, and/or Express Train	San Francisco-Los Angeles	31 - 52	48 - 81	74 - 123	San Jose-Anaheim	31 - 52	48 - 81	74 - 123	Fresno-Millbrae	25 - 41	38 - 64	58 - 97	Sacramento-Fresno	27 - 45	43 - 71	64 - 107	Los Angeles-Kings/Tulare	25 - 42	40 - 66	60 - 100
Station to Station	Buy-ahead, Off-peak, and/or Multi-stop Train	Average Fare assumed in Forecasts	Last-minute, Peak, and/or Express Train																						
San Francisco-Los Angeles	31 - 52	48 - 81	74 - 123																						
San Jose-Anaheim	31 - 52	48 - 81	74 - 123																						
Fresno-Millbrae	25 - 41	38 - 64	58 - 97																						
Sacramento-Fresno	27 - 45	43 - 71	64 - 107																						
Los Angeles-Kings/Tulare	25 - 42	40 - 66	60 - 100																						

Comment Summary		Response			
GENERAL	FB-Response-GENERAL-23: HST Ticket Fares				
		Bakersfield-Merced	23 - 39	37 - 62	56 - 93
		Palmdale-San Diego	27 - 46	34 - 57	44 - 73
		Source: 83% fare from CAHSRA 2012 Business Plan, p. 5-12, PB calculations for 50%			

Comment Summary	Response
GENERAL	FB-Response-GENERAL-24: Ridership
<p>Commenters questioned the HST ridership numbers, and wondered how they were forecasted.</p>	<p>In regards to the HST ridership modeling and the data/analysis used to develop ridership forecasts, mathematical models, which consist of a series of numerous mathematical equations, provide a tool for predicting how people will travel in the future as a function of variables such as population, employment, travel time and costs, fuel costs, and rail and airline schedules.</p> <p>The ridership forecasting model used to generate forecasts for this EIR/EIS is described in Chapter 2, Section 2.5 and was prepared by Cambridge Systematics. The model has three basic components: trip frequency/group size; destination; and choice of mode. These are defined as follows:</p> <ul style="list-style-type: none"> • Trip frequency/group size: This component forecasts how individuals travel between regions, organized by purpose: Business, Commute, Recreation, and Other. The forecasts for the individuals are based on 99 combinations of household characteristics, including factors such as the number of people in the household, income, the number of autos owned, and the number of workers. • Destination Choice: The destinations of trips are based on how accessible households are to places they might choose as destinations. This accessibility is based on the combined travel characteristics of all types of travel modes as well as the opportunities afforded (work, recreation, etc.) at the potential destinations. • Mode choice: Mode choice focuses on if a traveler will choose to travel by car, air, conventional rail, or high-speed rail as the primary mode for the bulk of their journey. To estimate this, the model considers the travel times and costs associated with different parts of the trip. For air and rail, this includes getting to or from the station/airport, including getting to or from the station entrance to the seat on the train/plan. For auto travel, this is the time and cost of driving. The values of these times and costs are converted to "utilities." The relative values of the different components were estimated through a statistical analysis of surveys of travelers. Different kinds of travelers value the travel time and costs of the parts of the journey differently. For each potential trip, the model compares the utilities of the different modes, and then estimates the probability of a traveler choosing one mode or another. If one mode has a significantly higher utility than the others do, then a higher proportion of all of the travelers are likely to choose that mode. If the utilities between the modes are closer, then proportions of travelers choosing each mode will be similar. <p>For the HST project, the ridership model forecasts travel between 4,667 traffic analysis zones (TAZs) comprising the entire state of California. The TAZs can be aggregated into 14 major regions within the State using the following procedures:</p> <ul style="list-style-type: none"> • For travel within regions served by more than one high-speed train (HST) station (areas such as -the SCAG, MTC, and SANDAG regions), the existing regional travel demand models were adapted to include high-speed train (HST) as a new mode. • For travel served by one high-speed train (HST) station, the model forecasts the travel between regions. This model conservatively only includes travel by California residents. This means that travel by people from other states or countries that fly to an airport, spend some time in a city and then might want to use HST to go to another city, are not included and would represent additional passengers for the system.

Comment Summary	Response
GENERAL	FB-Response-GENERAL-24: Ridership
	<p>The Authority has developed a thorough review process for the ridership model and ridership forecasts to ensure an unbiased assessment of the model methodology and data variables. The center piece of this independent review is the continuing oversight by a panel of international ridership modeling experts of the development of the model, the preparation of scenarios and the validation of the results. The panelists include:</p> <ul style="list-style-type: none"> • Frank S. Koppelman, PhD, Professor Emeritus of Civil Engineering, Northwestern University (chair) • Kay W. Axhausen, Dr. Ing., Professor, Institute for Transport Planning and Systems, ETH Zurich (Swiss Federal Institute of Technology Zurich) • Eric Miller, PhD, Professor, Department of Civil Engineering and Director, Cities Centre, University of Toronto • David Ory, PhD, Principal Planner/Analyst, Metropolitan Transportation Commission • Kenneth A. Small, PhD, Professor Emeritus, Department of Economics, University of California-Irvine <p>In 2011, the panel conducted an extensive review of the reports and documentation about the ridership model prepared by Cambridge Systematics during model development (2005-2007) and additional documentation about the model Cambridge provided in response to panel questions. This thorough review process resulted in confirmation that the model was adequately suited to the tasks for which it has been used in environmental analysis. At the same time, the panel recommended continued improvements and refinements in the model to make it a better tool for business planning purposes, a process which has been undertaken. Documentation of all ridership model materials is available on the Authority's website: http://www.hsr.ca.gov/About/ridership_and_revenue.html.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-25: Bakersfield Alternatives
<p>Many commenters expressed concern about HST impacts in the Bakersfield area and requested that additional alternatives be studied for the city of Bakersfield. Commenters also expressed concern about a perceived lack of coordination with the City and its residents.</p>	<p>The Authority and FRA began coordinating with the city of Bakersfield and Kern County on alternative alignments through the Bakersfield metropolitan area during the initial engineering and environmental studies for the California HST System in the late 1990s. As part of those studies, the Authority identified a range of alignment and station alternatives, including alternatives through downtown Bakersfield and around the urban core of Bakersfield to the northeast and southwest. In coordination with a local task force, the Authority identified 7 potential station sites in the urban and suburban areas of metropolitan Bakersfield along with 4 potential alignment alternatives. This analysis is presented in the Sacramento to Bakersfield High-Speed Train Alignments/Stations Screening Evaluation prepared for the Authority by Frederic R. Harris, Inc. (2001) and available on the Authority website.</p> <p>In coordination with the alignment and station alternatives screening that the Authority was conducting, the Kern Council of Governments (COG) commissioned its own study, the High Speed Rail Terminal Impact Analysis (Kern COG 2003), to determine a community-preferred site for Bakersfield's future high speed rail station. This report is available on the Kern COG website at http://www.kerncog.org/publications. The Authority identified three sites within metropolitan Bakersfield in its screening studies: Meadows Field vicinity, Golden State/"M" Street, and Truxtun/"S" Street. The Kern COG commissioned their study to recommend a locally preferred station site to be forwarded to the Authority. The Kern COG study was not intended to include final station design concepts or cite specific environmental impacts, but rather as a tool for the Authority to understand the Bakersfield community's concerns as well as to explain potential partnering opportunities. The study evaluated the sites for concerns regarding mobility, access and intermodal connectivity, cost, user convenience, impact on the built environment (business and residential relocations), air quality, economic development, and environmental impacts. A series of outreach meetings was undertaken by the Kern COG in order to compile and understand various objectives and preferences for a station site. This study considered a 2- and 4-track alignment for the high-speed train.</p> <p>On July 1, 2003, the Kern County Board of Supervisors adopted Resolution 2003-290 in support of the Truxtun Avenue terminal site. On July 9, 2003, the Bakersfield City Council voted to adopt Resolution 118-03 endorsing the Truxtun Avenue site as their preferred site. And on September 18, 2003, Kern Council of Governments adopted Resolution 03-23 to designate the Truxtun Avenue terminal site as "the preferred base system local alternative site for the Metropolitan Bakersfield high-speed rail terminal."</p> <p>In a comment letter of August 18, 2004, on the Statewide Program Draft EIR/EIS for the California HST System, the Director of the Kern County Community and Economic Development Department stated:</p> <p><i>The Kern County Board of Supervisors and the Bakersfield City Council unanimously approved a preferred station location in downtown Bakersfield in the vicinity of the current Amtrak station ("Truxtun Station"). An extensive study was commissioned by the Kern Council of Governments to assist in determining a preferred station location. This location was also adopted by the Board of the Kern Council of Governments, which is made up of representatives from the County and all incorporated cities within the County.</i></p> <p><i>Between Sacramento and Bakersfield, the County of Kern has no preferred rail alignment. Either the Union Pacific Railroad (UPRR) or the Burlington Northern-Santa Fe (BNSF) alignments are acceptable as long as they support the</i></p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-25: Bakersfield Alternatives
	<p><i>Truxtun Station location site.</i></p> <p>Based on the extensive planning studies done by Kern COG and supported by the city of Bakersfield and Kern County, the Record of Decision (ROD) for the Statewide Program EIR/EIS for the California HST System (Authority and FRA 2005), identified the Truxtun Station as the preferred HST station location in Bakersfield.</p> <p>Beginning in 2009, the Authority conducted an analysis of specific alignment and station alternatives along the preferred BNSF corridor with a station in the vicinity of Truxtun Avenue following the determinations of local government and the decisions made in the ROD. As described in Section 2.3.2.3 of the EIR/EIS, 10 preliminary alignment alternatives were identified for this analysis. Based on environmental, engineering, and cost factors and following numerous public meetings and meetings with local government staff, 2 alternative alignments and station locations were selected for analysis in the project-level Draft EIR/EIS for the Fresno to Bakersfield Section. Based on public and agency comments, a third alternative was identified to reduce impacts to the community that was analyzed in the RDEIR/SDEIS.</p> <p>The Authority has conducted a preliminary evaluation of potentially bypassing downtown Bakersfield to the north or south with alignments diverging from the alternatives that have been evaluated in the Fresno to Bakersfield Section EIR/EIS in the Shafter area. On the north side of Bakersfield, alignments could travel east from the Shafter area to the SR 99 corridor, traveling down SR 99 to SR 178 where these alignments could then follow the UPRR corridor and the Edison Highway, merging with existing alternative alignments in the vicinity of Oswell Street. This would essentially transfer urban impacts to another part of the Bakersfield metropolitan area.</p> <p>It is not practicable to carry alternative alignments from the Shafter area further east than SR 99. All alternatives north of the Bakersfield metropolitan area must eventually turn south to reach a viable location to cross the Tehachapi Mountains. To make that turn south, an alternative alignment east of SR 99 would either cross the Kern River Oil Field, the third largest oil field in California, requiring the relocation of over 500 active oil wells, or cross through residential, commercial, and industrial areas of Oildale and northern and eastern Bakersfield outside of an existing transportation corridor.</p> <p>Some comments on the RDEIR/SDEIS suggest that the HST should cross the southern suburbs of metropolitan Bakersfield in the general area of Panama Lane or the Taft Highway (SR 119). To avoid the western urban area of metropolitan Bakersfield, alternatives would first have to drop straight south from the Shafter area before curving east to parallel major east-west roads at the southern end of the metropolitan area. This would require crossing the Kern River west of metropolitan Bakersfield, impacting natural habitats, including alkali desert scrub and annual grasslands, which are not impacted by the existing alternatives through Bakersfield. It would also be difficult to avoid the Kern Water Bank (KWB) Mitigation Bank and the Sand Ridge Preserve, a 270-acre U.S. Department of the Interior-designated National Natural Landmark, with these alternatives. Crossing the Kern River west of Bakersfield would have substantial impacts on a variety of special-status species include blunt-nosed leopard lizard, western burrowing owl, Swainson's hawk, Nelson's antelope squirrel, Tipton kangaroo rat, San Joaquin kit fox, San Joaquin woollythreads, Bakersfield cactus, and California jewelflower. Finally, these alternatives would impact natural wetland and riverine habitat that would not be impacted by the existing alternatives through Bakersfield.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-25: Bakersfield Alternatives
	<p>The RDEIR/SDEIS for the Fresno to Bakersfield Section addresses the potential impacts of the three alignment alternatives through downtown Bakersfield in accordance with the decisions made in the ROD for the Statewide Program EIR/EIS on the California HST System, as supported at that time by the city of Bakersfield, Kern County, and Kern COG. However, the Authority recognizes that there is no "one size fits all" strategy for every community along the HST System and that the city of Bakersfield's views on the appropriate way of implementing high-speed rail in their community are evolving. The Authority continues in its commitment to work with local communities and stakeholders to ensure their concerns are heard and that Central Valley communities are able to take advantage of the potential benefits of high-speed rail.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-26: Length of the EIR/EIS
<p>Commenters complained about the length of the EIR/EIS and many with this complaint stated that the document was 30,000 pages long.</p>	<p>The assertion that that EIR/EIS is 30,000 pages is not accurate. All three volumes of the environmental document total approximately 4,800 pages. Volume I encompasses the main report on environmental impacts, Volume II is the Technical Appendices and Volume III is the design drawings/alignment plan sheets.</p> <p>The purpose of an EIR/EIS is to disclose information to decision makers and the public. While the science and analysis can be complex, this document is intended for the general public. Every attempt has been made to limit technical terms and the use of acronyms. Where this cannot be avoided, the terms and acronyms are defined the first time they are used, and a list of acronyms and abbreviations is provided in Chapter 13 of this document.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-27: CEQA, NEPA, and Executive Order 12898 Compliance
<p>Commenters contended that the Authority did not comply with NEPA and Executive Order 12989 because the agency issued its environmental justice policy and guidance in August 2012, after the Draft EIR/EIS and RDEIR/SDEIS had been prepared.</p>	<p>The publication date of the Authority's environmental justice policy and guidance does not change the Authority's past and ongoing actions to comply with the requirements of NEPA, CEQA, and the EO 12898. The EIR/EIS provides documentary evidence that the Authority and FRA are fulfilling their duties those laws. The range of project alternatives was identified after soliciting and receiving input from environmental justice communities. The impacts, both adverse and beneficial, of the Project were evaluated at an equal level of detail and fully disclosed in the EIR/EIS. Throughout the EIR/EIS process, the Authority and FRA sought and received input from the public including groups identified as minority, low income or disadvantaged to refine project design and identify measures to minimize project impacts. No evidence has been presented contradicting the Authority's obligation to comply with CEQA and FRA's obligations to comply with NEPA and EO 12898.</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-28: Response to Comments Received After the Close of the Public Comment Period
	<p>The Draft EIR/EIS for the Fresno to Bakersfield Section was circulated for public review and comment between August 9, 2011 and October 13, 2011. The Revised DEIR/Supplemental DEIS for the Fresno to Bakersfield Section was circulated for public review and comment between July 20, 2012 and October 19, 2012. Responses to public and agency comments received during those two review periods are provided in Volumes IV (responses to comments on the Draft EIR/EIS) and V (responses to comments on the Revised DEIR/Supplemental DEIS) of this Final EIR/EIS for the Fresno to Bakersfield Section.</p> <p>There were approximately 150 submissions to the Authority and FRA following the close of the comment period on the Revised DEIR/Supplemental DEIS. These letters are included in Chapters 49 through 51 of Volume V. About 37% (55) of these submissions wanted to know if project facilities would impact specific parcels of land or when the Authority would initiate the right-of-way acquisition process for specific parcels. Over 20% (34) of the submissions were individuals seeking work on the project. About 17% (25) of the submissions were seeking further information on the project including clarification of schedule dates or expressed support or opposition for the project or specific project alternatives.</p> <p>A number of submissions provided additional information on impacts of project alternatives. Most of those submissions raised concerns or provided information that was included in comments received during the comment period and addressed in the Final EIR/EIS and Volumes IV and V. Those comments that provided information not previously addressed are discussed briefly here.</p> <p>Hormel Foods and Sunny Gem provided information on project impacts to specific industrial facilities that these companies own. The cities of Wasco and Shafter, Vintage Production Company, and landowners provided additional information on impacts of the alignment alternatives being evaluated in the Wasco-Shafter area.</p> <p>A submission by Bethel Christian School and First Free Will Baptist Church in Bakersfield claims that the Bakersfield Hybrid Alternative illegally places a burden on a religious institution based on 42 U.S.C. 2000cc, which states “no government shall impose or implement a land use regulation in a manner that imposes a substantial burden on the religious exercise of a person.” The Authority cannot implement land use regulations. The Revised DEIR/Supplemental DEIS provides an assessment of the impacts of the project on the Bethel Christian School and First Free Will Baptist Church, including a safety analysis. Project impacts resulting from the selection of the Bakersfield Hybrid Alternative would not preclude the continued use of the school and church. The Bakersfield Hybrid Alternative would not physically encroach on the property occupied by the school and church; therefore, the Authority would not relocate or rebuild the school and church with the Bakersfield Hybrid Alternative. However, the Bakersfield South Alternative would require relocation of the Bethel Christian School and First Free Will Baptist Church. The Authority would consult with the church and school to identify suitable relocation alternatives for both facilities to minimize impacts of disruption if the Bakersfield South Alternative was selected.</p> <p>A firm representing Citizens for California High Speed Rail Accountability (CCHSRA), Kings County, and the Kings County Farm Bureau provided submissions requesting recirculation of the Revised DEIR/Supplemental DEIS, circulation of a supplement to the 2005 Statewide Program EIR/EIS for the California HST System, and coordination of project planning and environmental review. This request is based on alleged substantial changes in the project’s circumstances, its design, and feasible alternatives. None of the information provided in the submissions alter the analysis provided in the Revised</p>

Comment Summary	Response
GENERAL	FB-Response-GENERAL-28: Response to Comments Received After the Close of the Public Comment Period
	<p>DEIR/Supplemental DEIS. The design changes referenced in the submissions do not alter the nature or magnitude of impacts addressed in the Revised DEIR/Supplemental DEIS (URS/HMM/Arup Joint Venture 2014). The alternatives recommended in the submissions are addressed in Chapter 2.0 of the Revised DEIR/Supplemental DEIS and additional information on why these alternatives are not feasible is provided in Standard Response FB-Response-General -02 and specific responses to comments received on the Revised DEIR/Supplemental DEIS. Standard Response FB-Response-General-08 addresses Authority consultation with public agencies.</p> <p>A comment in one of the submissions made on behalf of CCHSRA, Kings County, and the Kings County Farm Bureau implies that project mitigation for construction air quality mitigation has been deferred because the Voluntary Emissions Reduction Agreement (VERA) between the Authority and the San Joaquin Valley Air Pollution Control District (SJVAPCD) has not been finalized and circulated to the public. The EIR/EIS addresses the VERA program in Chapter 3.3, Air Quality. The following discussion further describes the VERA program for the benefit of the public.</p> <p>The VERA agreement provides funding for the SJVAPCD's program to offset mobile sources of pollutants. Before commencing construction for any construction package, the Authority will enter into an agreement with the SJVAPCD whereby the SJVAPCD will provide offsets for the project's estimated construction emissions of criteria pollutants. That agreement is based on the construction emissions modeled for the project that are provided in the EIR/EIS multiplied by the unit price per ton of pollutants that has been set by the SJVAPCD's Rule 9510. The SJVAPCD will provide funding to third parties to purchase new equipment, such as new farm tractors, that emit fewer pollutants than the existing equipment. The funding is provided through individual incentive program funding agreements (IIPFA) that require the third party to use the new equipment for a minimum number of hours based on the user's historical use of the replaced equipment over a specified number of years. These IIPFAs result in a reduction in regional pollutant emissions that the SJVAPCD credits to the Authority as offsets to project construction emissions.</p> <p>As a condition of the design-build contract, the construction contractor will be required to track daily use of each piece of construction equipment, delivery trips, hauling trips, and employee vehicle trips. These data are used in an air quality model that the Authority and SJVAPCD have agreed to, in order to estimate the actual emissions related to project construction. The data from this modeling is reported to the SJVAPCD every quarter during construction and a Final Construction Report summarizing all actual construction-related emissions will be submitted by the Authority to SJVAPCD. The Authority and SJVAPCD will use this information to ensure that the Authority has fully offset all construction period emissions.</p>

Comment Summary	Response
TRANSPORTATION	FB-Response-TR-01: Construction Period Traffic Management Plan
<p>Some commenters had concerns about material hauling and other construction impacts, short-term impacts due to road closures, additional information regarding detailed construction activity, and construction impacts on school transportation and on farm equipment.</p>	<p>Under the design-build contract, the Contractor will prepare and implement a detailed Construction Transportation Plan (CTP), (see Section 3.2.6) and the Construction Management Plan (see Section 3.12.10, Project Design Features), will be prepared as the project progresses into the final design phase and more details are developed regarding construction plans. CTPs are standard means of minimizing traffic conflicts during construction and depending on the type and extent of construction, typically include detours and lane control features such as signage, lighting, and flag persons. Section 3.2.6, Project Design Features, in the EIR/EIS describes the types of activities addressed by the CTP.</p> <p>The CTP will address in detail the activities to be carried out in each construction phase. Such activities include, but are not limited to, the routing and scheduling of materials deliveries, materials staging and storage areas, construction employee arrival and departure schedules, employee parking locations, and temporary road closures, if any. The CTP will include a traffic control plan that addresses temporary road closures, detour provisions, allowable routes, and provisions for emergency access, school transportation, and farm equipment. Extensive coordination with the local public agencies, including school districts, will be conducted during the CTP development process and measures will be included in the CTPs to address the impacts to local roads.</p> <p>Because of both the timing of the project and because the selected proposal for design-build will likely influence the outcome, the CTP will not be prepared prior to the award of a design-build contract. The CTP will be prepared by the design-build contractor to match their proposed work program. The local jurisdiction (city or county) where the work will occur will provide its requirements and criteria to be included as the design-build contractor prepares the CTP. The CTP will be prepared in close consultation with the pertinent city or county, and will be reviewed and approved by the Authority before commencing any construction activities. Implementation of the CTP will be enforceable as a requirement of the design-build contract.</p>

Comment Summary	Response
TRANSPORTATION	FB-Response-TR-02: Road Closures
<p>There were several comments pertaining to road closure impacts on property access, impacts of detour traffic on the existing roads; inadequate analysis of detour traffic because of the proposed road closures.</p>	<p>HSR policy is to provide roadway overpasses approximately every 2 miles, resulting in no more than 1 mile of out-of-direction travel for vehicles, including school buses, to cross the HST tracks. In many locations in the Fresno to Bakersfield Section, roadway overpasses would be provided more frequently, approximately every mile or less, because of the existing roadway infrastructure. Consequently, out-of-direction travel would be limited to approximately 1 mile in nearly all locations in the project area. As presented in Section 3.2.5 of the EIR/EIS, based on existing field traffic counts of similar roadways and information from local agencies, the traffic volumes on these local roads are generally less than 500 vehicles per day. Because most detours are limited and because few travelers are affected, only small effects to traffic circulation are expected as a result of the closures and diversion of traffic.</p> <p>Road closure and property access impact mitigation measures are identified under Section 3.2.7 of the EIR/EIS. Transportation Mitigation Measure #1 (TR-MM#1) states that if a proposed road closure restricts current access to a property, the project would provide alternative access via connections to existing roadways. If adjacent road access is not available, then feasible new road connections would be provided. If alternative road access is not feasible either, then the property would be considered for acquisition.</p>

Comment Summary	Response
TRANSPORTATION	FB-Response-TR-03: Station Parking
<p>Some commenters had concerns regarding the proposed stations' on-site and off-site parking facilities, station footprints, and effects on local traffic flow.</p>	<p>Parking for each of the station alternatives is discussed in Section 2.5, with more detail about the prospective parking demand in Section 2.4.4. In the EIR/EIS, the 2035 full system high ridership forecast was used to capture the maximum potential station parking demand and to allow for an analysis of where and how parking demand might be accommodated near the HST station. Parking availability itself is not a direct environmental impact, but secondary physical impacts from parking, such as traffic, noise, and air quality are (CNRA 2009).</p> <p>The EIR/EIS's analysis of high forecasts for parking provides flexibility over time to reduce the amount of station parking based on more refined demand projections and TOD around station areas. Land use development around the HST stations is anticipated to occur over time. The amount of nearby development, as well as the future availability of local transit connections, both of which tend to decrease parking demand, would influence the future parking demand. While the HST would be a catalyst for such development, the actual timing would be dictated by land use decisions based on market conditions by the cities of Fresno, Hanford, and Bakersfield, and Kings County, and market conditions. Demand for parking facilities would also depend on how HST ridership grows over time; essentially and within the parameters of the environmental analysis, decisions concerning the construction of parking facilities would be made as needed, taking into account the existing parking availability.</p> <p>The Authority and FRA would therefore retain the flexibility to make decisions about what parking facilities to construct initially and how additional parking might be phased in or adjusted depending on how the HST System ridership increases over time and how the station area develops over time. For example, it is possible that some parking facilities might be constructed at the 2020 project opening, only to be replaced in whole or in part, or augmented later with development of other parking facilities (see Section 2.5.3). To the extent these new facilities are not covered by the current environmental review, they may require additional environmental review in the future prior to changes in parking supply. However, as discussed in Section 3.2.5, the project has reviewed and disclosed the impacts of a plan that would accommodate maximum possible parking demand. On-street parking management in neighborhoods or business districts adjacent to the stations would be the responsibility of the city that has jurisdiction where the station lies.</p> <p>The study area for each station was established by considering the potential for impacts on roadway segments and at intersections from new, station-related traffic (i.e., traffic generated by that station). The traffic analysis considered traffic increases on nearby streets that would be expected to result from the projected ridership at each station (see Section 3.2.4). This analysis included considerations of parking demand at the stations and their impact on existing parking facilities (see Section 3.2.5).</p>

This page intentionally left blank.

Comment Summary	Response
<p>AIR QUALITY</p> <p>Commenters raised concern about air quality and health impacts (for example, respiratory diseases) due to fugitive dust emissions caused by the moving HST. Commenters requested clarification on the dust emissions, effects on human health, and the controls that would be applied to reduce the dust emissions.</p>	<p>FB-Response-AQ-01: Dust from train operation</p> <p>The moving HST would induce airflow in its immediate proximity. The speed of the induced airflow can be high near the passing train but drops off sharply a short distance away. Based on the U.S. Department of Transportation (DOT)-FRA computer model, induced airflow would be approximately 22 mph at 10 feet from the train, for a period of approximately 1 second (see Section 3.14.5.3). Wind speed would drop substantially with increased distance from the train. Because the track would be at least 21 feet from the edge of the right-of-way, train-induced wind outside the right-of-way would be minimal.</p> <p>Fugitive dust emissions due to the HST-induced airflow were evaluated in the EIR/EIS. As discussed in Section 3.3.6.3 of the EIR/EIS, Appendix 3.3-A of the EIR/EIS, and Appendix D of the Air Quality Technical Report (Authority and FRA 2012b), as the airflow diminishes, fugitive dust emissions beyond 10 feet from a train traveling at high speed and the subsequent health risks would be negligible. The estimated fugitive dust emissions caused by one train trip, based on the most conservative assumption of surface parameters and the maximum HST speed of 220 mph, would be 27 lb/mile of PM₁₀ and 4 lb/mile of PM_{2.5}. Emissions at lower vehicle speeds, such as through populated urban areas or when approaching stations, would be much lower. In addition, HST would typically travel along areas with less residential land use. When the HST travels in populated or urban areas, the sound walls installed in these areas and near stations for noise control would retain a portion of the dust emissions within the project right-of-way.</p> <p>Generally, PM_{2.5} emissions are a greater health concern than PM₁₀ emissions. As indicated by the emission data, only a small portion of the fugitive dust would be fine particles (PM_{2.5}). See Table 3.3-11 and Table 3.3-12 of the EIR/EIS. While the EIR/EIS significance conclusion is based on the combined indirect and direct emissions during operation, the PM_{2.5} emissions from direct sources including HST operation fugitive dust is still below the SJVAPCD significance threshold. Therefore, the PM_{2.5} emissions associated with HST operation would not create a significant impact even if the net benefit of emission reductions from indirect sources is excluded. It is unlikely given this that the HST operation fugitive dust will contribute substantially to either a regional or local air quality impact.</p>

Comment Summary	Response
AIR QUALITY	FB-Response-AQ-02: General Environmental Concern
Commenters raised general concerns about air quality impacts due to the HST Project construction and operation.	<p>The air quality analysis has identified emission impacts from the project during the construction phase. The regional significant construction emission impacts will be completely offset to below a level of significance through the VERA between the Authority and the San Joaquin Valley Air Pollution Control District.</p> <p>HST operations would help improve long-term air quality in the San Joaquin Valley Air Basin by reducing VMT, a major source of air pollution. As automobiles produce a major portion of the air pollutants generated within the basin, reducing VMT would reduce these emissions and result in lower emissions than would occur under the No Project Alternative. As described in EIR/EIS Section 3.3.6.3, the activities undertaken as part of the VERA along with reductions in VMT and the consequential reduction in air pollution would reduce any emission increases associated with the operation of the HST System itself below the level of significance.</p>

Comment Summary	Response
AIR QUALITY	FB-Response-AQ-03: Increased Emissions Due to Re-routed Travel of Farm Vehicles
Commenters indicated that due to the HST Project operation, people would need to travel greater distances to get to a location to cross the track. The commenters suggested that additional VMT caused by rerouting to an overpass may cause additional air quality impacts.	<p>On average, roadway overpasses would be provided approximately every 2 miles along the track. It is estimated that the proposed project would result in no more than 1 mile of out-of-direction travel for vehicles to cross the HST tracks. The width of the roadway overpasses would accommodate both farm equipment and school buses traveling in opposite lanes. Due to this frequency of roadway crossings, additional distances traveled by vehicles to cross the HST tracks are expected to be negligible relative to regional VMT reductions, and therefore would not cause additional air quality impacts because there is no net increase in activity regionally and only small increases locally that will not be large enough to increase local air quality impacts. This is explicitly modeled for carbon monoxide hot spots, and no significant effects were found as discussed in Section 3.3.6.3. It was also determined that PM hot-spot modeling would not be required and an analysis of mobile source air toxics projects a general decreasing trend due to improvements in vehicle emission technology. For more details on roadway overcrossings, see Sections 2.2.4 and 2.2.5 of the EIR/EIS.</p>

Comment Summary	Response
AIR QUALITY	FB-Response-AQ-04: Localized Air Emission Increase
Commenters acknowledged the regional air quality benefits during project operation but suggested that air quality impacts in a specific city or county were not evaluated.	<p>Air quality benefits of the HST Project operation are evaluated at the regional level. The HST would improve long-term air quality in the San Joaquin Valley Air Basin by reducing motor VMT. Automobiles produce a major portion of the air pollutants generated within the basin, and reducing VMT would reduce these emissions. Over the long-term (year 2035), the HST Project would result in smaller increases in motor vehicle emissions than would occur with the No Project Alternative, and these reductions would more than offset any emission increases associated with the operation of the HST System itself. See Section 3.3.6 of the EIR/EIS for a summary of the potential impacts. Details of VMT and emission reductions in each county in</p>

Comment Summary	Response
AIR QUALITY	FB-Response-AQ-04: Localized Air Emission Increase
	<p>the study area are included in the Air Quality Technical Report, which is available on the Authority's website.</p> <p>At the local level, microscale analyses were completed at the locations along the alignment from Fresno to Bakersfield, where the potential air quality impacts are highest, including heavily traveled roadways, congested intersections, and areas near HST station parking structures. No violations of ambient air quality standards, and therefore no significant air quality impacts, are predicted to occur at any of these locations.</p>

Comment Summary	Response
AIR QUALITY	FB-Response-AQ-05: Mitigation
<p>Commenters indicated that because project construction would have significant air quality impacts, additional evaluation of mitigation measures needs to be included in the EIR/EIS. All feasible mitigation measures need to be implemented. Commenters suggested several mitigation measures, including using offsite mitigation measures, additional vehicle and construction equipment emission control, additional toxic emission control at HMF, and fugitive dust control from concrete batch plants.</p>	<p>A wide range of measures recommended by the SJVAPCD have been incorporated into the project to minimize fugitive dust emissions during construction. These measures include project design features identified to reduce or avoid adverse impacts from the Project on air quality. In addition as described in Section 3.3.8. Mitigation measures have been refined as a result of continuing project design, comments received on the Draft EIR/EIS and RDEIR/SDEIS, and additional consultation with public agencies. Many of these mitigation measures are based on performance standards. Accordingly, appropriate mitigation has been included in the Final EIR/EIS and will also be included in FRA's Record of Decision, which will require the Authority to comply with all mitigation measures and project design features to minimize air quality impacts as the project advances through final design and construction.</p> <p>Detailed mitigation measures were revised in the RDEIR/SDEIS to incorporate the comments and are described in Section 3.3.9, which include:</p> <ul style="list-style-type: none"> • Reduce construction equipment exhaust emissions by using the cleanest reasonable available equipment. This suggestion was incorporated into AQ-MM#1 and AQ-MM#2 which established a minimum performance standard for both on-road and off-road construction equipment. The mitigation measures require documentation of efforts to procure construction equipment to ensure that the cleanest reasonably available equipment is used. • Reduce emissions from material hauling trucks during project construction by using vehicles that are equivalent to model year 2010 or newer. This suggestion was incorporated into AQ-MM#2 which establishes this as a performance standard. The mitigation measures require documentation of efforts to procure construction equipment to ensure that the cleanest reasonably available equipment is used. • Locate concrete batching plant at 1,000 feet from sensitive receptors. This suggestion was incorporated into AQ-MM#3 as an option to conduct a site-specific health risk assessment of final concrete batch plant location and concrete throughput to ensure impacts to sensitive receptors is less than the applicable threshold. • Offset project construction emissions through the San Joaquin Valley Air Pollution Control District (SJVAPCD) Voluntary Emissions Reduction Agreement (VERA) program. This suggestion was incorporated into AQ-MM#4 which

Comment Summary	Response
AIR QUALITY	FB-Response-AQ-05: Mitigation
	<p>will offset construction emissions.</p> <ul style="list-style-type: none"> • Purchase offsets for emissions associated with hauling ballast materials outside of the San Joaquin Valley Air Basin (SJVAB). This suggestion was incorporated into AQ-MM#5. • Reduce potential impacts from air toxics from HMF sites, including the use of electric or hybrid trucks, use of electric or Clean Switcher Locomotives, adjustment of facility operation and orientation, and definition of buffer distance between diesel truck operation and sensitive receptor areas. These suggestions were incorporated into AQ-MM#6 along with other potential options to reduce air toxic emissions at the HMF facility. Equipment at the HMF will use best industry practice or alternative equipment to reduce emissions. This suggestion was incorporated into AQ-MM#7.

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-01: Animal Effects
<p>Commenters expressed concerns related to animal effects from noise and vibration, including effects on production and breeding and animal responses to startle.</p>	<p>Research on noise effects on wildlife and livestock is limited, but suggests that noise levels above 100 decibels (dBA) Sound Exposure Level (SEL) (the total A-weighted sound experienced by a receiver during a noise event, normalized to a 1-second interval) may cause animals to alter behavior. Accordingly, the FRA High Speed Ground Transportation Noise and Vibration Impact Assessment Manual (2005) and the updated 2012 Manual consider an SEL of 100 dBA the most appropriate threshold for disturbance effects on wildlife and livestock of all types. The level is based on a summary of the research and studies referenced in the FRA Guidance Manual in Appendix A. Given a reference SEL of 102 dBA at 50 feet for a 220-mph HST on ballast and tie track, an animal would need to be within 100 feet of an at-grade guideway to experience an SEL of 100 dBA. At locations adjoining an elevated guideway, an SEL of 100 dBA would not occur beyond the edge of the elevated structure. Refer to Section 3.4.3.3, Impact Assessment Guidance, and Section 3.4.5.3, High-Speed Train Alternatives, of the EIR/EIS under the heading Noise Effects on Wildlife and Domestic Animals for further information regarding noise effects on wildlife and livestock.</p> <p>Table 3.4-26 of the EIR/EIS presents the screening distances to the HST tracks within which the level would exceed the criteria and therefore may affect animals for both at-grade and elevated structures. The criterion for assessing potential noise impact on wildlife and domestic animals is an SEL of 100 dBA from HST pass-by events. This criterion is based on research and studies into potential effects from HST noise on animals, which are referenced in the FRA Guidance Manual and described in Appendix A of the Fresno to Bakersfield Noise and Vibration Technical Report (Authority and FRA 2012e). These potential effects include relocation, running, physiological effects such as changes in hormones or blood composition, and startle. The potential noise effects on animals at an SEL of 100 dBA would not reduce milk production in dairy cows or increase heart rates in domestic mammals. The criteria for potential startle from rapid onset rates of HST noise apply to humans as the supporting research is based primarily on human response to rapid onset rates from military aircraft flights. According to research and studies into noise on animals referenced in the FRA Guidance manual in Appendix A, there is no conclusive evidence of noise and vibration decreasing production in livestock or affecting breeding habits.</p>

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-02: Schools
<p>Commenters expressed concerns related to specific schools, and some comments request calling out schools by name in the document. Some commenters also expressed concerns that schools are not given special regard with FTA criteria and effects to children's health are not</p>	<p>FRA noise impact assessment methodology contains criteria for noise and vibration impact to schools as well as other institutional land use. Schools and other institutional land uses with no nighttime use are included in FRA Land Use Category 3 for noise and vibration impact criteria. Category 3 includes institutional land use with primarily daytime and evening use. This includes schools, libraries, and churches, where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.</p> <p>The impact assessment in the EIR/EIS identifies specific locations with impacts to sensitive receivers (such as a school). See Tables 3.4-14 through 3.4-24 for a tally of affected sensitive receivers, Table 3.4-25 for the impacts to schools within 2,500 feet of the track centerline, and Figures 3.4-9 through 3.4-13 for the locations of affected sensitive receivers. However, if an</p>

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-02: Schools
addressed.	impact is not projected, the receiver is not discussed in the assessment. In other words, consistent with the FRA noise impact assessment methodology, if a school (an example of a sensitive receiver) is outside the radius from the train at which the criterion/threshold is no longer exceeded, then a precise noise prediction at that location is not projected. It is important to note that the FRA and FTA noise and vibration impact criteria are based on human annoyance. The criteria are not related to health effects, nor do separate criteria exist for children. This is because the noise descriptors in the FRA manual are largely based on EPA studies that looked at the effects of noise on public health in the 1970s. The noise-sensitive areas (NSAs) discussion presented in Section 4.2.1, Noise Measurement Methodology, of the Noise and Vibration Technical Report, aims to summarize land use in the area near the proposed alternatives. Not every sensitive receiver analyzed is listed in these summaries; however, every sensitive receiver within approximately 2,500 feet of the track centerline was included in the noise and vibration assessment.

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-03: General Assessment Methodology Concerns - Use of FRA Methodology/Criteria
Commenters expressed concerns regarding how the noise and vibration assessments were completed in general. Some concerns relate to the criteria used and how noise levels are presented. Some commenters also requested more noise measurements.	<p>The FRA guidance manual (High Speed Ground Transportation Noise and Vibration Impact Assessment, 2005) was the primary methodology used for analyzing HST noise for the EIR/EIS. The FRA published an updated version in 2012, which contains the same methodology for assessing impacts. For evaluation of non-HST noise, such as noise from stations, maintenance facilities, and construction, FTA methodology was used (Transit Noise and Vibration Impact Assessment FTA Guidance Manual, 2006). To analyze the potential noise impacts during operations, the noise impact assessment procedure followed the FRA methodology. The FRA noise impact criteria are based on the potential annoyance of people to the project noise, and are not based on the potential audibility of a noise source. The noise impact criteria are defined such that where no impact is predicted, the project would result in an insignificant increase in the number of people highly annoyed by the new noise. The FRA guidance manual specifies that, within a screening distance of 1,300 feet (for a new project corridor in a quiet suburban/rural environment), noise-sensitive receptors would be close enough to a proposed project that there is the possibility of impact and that beyond this distance there is less possibility of impact. Screening distances are not meant to represent the distances within which the HST would be audible. The screening process is only an interim step in the analysis procedure. The screening allows for a high-level review of the corridor, to identify potential locations where noise impacts possibly may occur (thereby allowing more detailed analysis of those potential locations to determine if impacts actually would occur there) and to identify locations where impacts would not occur. This screening distance is based on the assumptions associated with typical projects such as the number of train operations, train speeds, and existing noise conditions. Based on the specific factors of the HST Project, potential impact was assessed for all noise-sensitive receptors within approximately 2,500 feet and potential impact has been identified at distances up to approximately 2,300 feet, which is further than the standard screening distance of 1,300 feet. One of the primary reasons that potential noise impact extends further than the typical screening distance is the low (i.e., less than 50-dBA Ldn) existing noise in some areas.</p> <p>Noise is evaluated using models. The existing noise levels were determined throughout the corridor by taking direct field noise measurements at certain noise-sensitive receptors following the FRA methodology. Noise measurements were taken at</p>

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-03: General Assessment Methodology Concerns - Use of FRA Methodology/Criteria
	<p>specific noise-sensitive locations near the alignment in the study area that were considered representative of conditions throughout the study area (see Figures 3.4-4 [I1] through 3.4-8 in the EIR/EIS). Specific measurement locations were selected based on their physical relationship to existing noise sources, such as major roads. Noise levels measured at these locations are representative of certain existing noise conditions and are applied to several neighborhoods with similar noise sources. Dominant existing noise sources in the study area were first determined by field observations and then confirmed by measurement data results, which indicated which noise events were the greatest contributors to the existing measured noise levels. Refer to Section 3.4.4, Affected Environment, for further information on noise measurement locations. The FRA and FTA noise criteria are based on a comparison of existing noise levels to future noise levels with the addition of project noise sources. The criteria are defined using a sliding scale in which there is greater potential for impact in areas where existing noise levels are quieter (i.e., rural areas) and less potential for impact where existing noise levels are higher (i.e., suburban and urban areas) because it requires less noise from the project to increase noise levels in the quieter areas.</p> <p>But the sliding scale also allows a larger increase in noise levels in the quieter areas than in areas with higher existing noise levels. The justification is that people already exposed to high levels of noise should be expected to tolerate only a small increase in the amount of noise in their community.</p> <p>For project noise levels, all the noise sources during a train pass-by are combined to provide the model with a single reference noise level for a train pass-by. FRA and FTA methods take this single reference noise level and, using the number of trains per hours during daytime and nighttime, use it to compute either the peak hour noise level or the Ldn (Day and Night Level) noise level. The peak hour noise level is used to identify noise levels at places that are used primarily for daytime activities, such as schools and parks. The Ldn is used to identify noise levels at places with sleep-related activities, such as homes, apartments, hospitals, and hotels. The Ldn adds a 10-dBA penalty to the hours between 10 p.m. and 7 a.m. to account for people being more sensitive to noise during these hours.</p> <p>Noise impact categories are defined according to FTA and FRA guidance. A severe noise impact is where the change in cumulative noise level (existing plus project noise) would be noticeable to most people and likely to generate strong, adverse reactions. A moderate noise impact is where the change in cumulative noise level would be noticeable to most people, but may not be sufficient to generate strong, adverse reactions. The Lmax is the maximum noise level for a particular event. The FRA noise impact assessment methodology is not based on Lmax, but rather on cumulative noise descriptors, which take into account how loud each event is, how long each event lasts, and, for land use categories where people sleep (including residences), how many events occur each day (including nighttime events). Reference levels at a particular distance and train speed are adjusted based on (1) the actual distances for each receptor along the corridor and (2) the actual train speeds at that location (both through trains and trains that may stop at additional stations). For example, because HSTs are powered electrically rather than by diesel engines (which are louder), an HST has to achieve a speed of 150 mph before it makes as much sound as a commuter train at 79 mph. The duration of the sound is also different; an HST moving at 220 mph would only be heard for about 4 seconds, while a typical freight train traveling at 30 mph can be heard for 60 seconds.</p> <p>Project analysts assessed noise impacts for noise-sensitive land uses based on a comparison of measured existing noise levels at representative locations along the proposed alignments, with modeled future noise levels from the HST and other project</p>

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-03: General Assessment Methodology Concerns - Use of FRA Methodology/Criteria
	<p>sources.</p> <p>The construction noise impact analysis was based on evaluating the noise expected to be generated by typical construction equipment and construction methods in comparison to existing noise levels. As mentioned above, the existing noise levels were determined throughout the corridor by direct field noise measurements.</p> <p>Local and city noise ordinances were acknowledged and presented in Appendix A, Local Noise Regulations, of the Noise and Vibration Technical Report (Authority and FRA 2012e). However, as this is a federally funded project, the Authority and FRA are required to follow the assessment guidelines set forth by the FRA and FTA, which provide uniform guidance on rail and transit projects. As a state agency, the Authority is not subject to local noise ordinances. However, during construction, the Authority and its design/build contractor will consider local noise sensitivities consistent with local ordinances and employ best management practices (BMPs) to minimize excess noise impacts during construction.</p> <p><i>Sensitive Land Uses</i></p> <p>The goal of the noise and vibration impact assessment is to identify all the areas that might be impacted by noise and vibration. Noise- and vibration-sensitive land is categorized according to FTA guidelines, as described in Section 3.4.3.3, Impact Assessment Guidance. Noise- and vibration-sensitive areas were identified based on current information available, including GIS data, aerial mapping, and field surveys. The potential for noise and vibration impact was assessed at all sensitive locations along the project corridor. According to FRA guidance, parks and other outdoor land use are not considered vibration sensitive. Parks are only considered to be noise-sensitive if the park is used in a manner that is noise-sensitive; active outdoor land uses, such as pedestrian and bike paths, are not considered noise sensitive. Only compatible land use, as determined first by FRA and Department of Homeland Security and then as approved by the local jurisdiction's land use plan, would be placed under the elevated guideway in the future.</p> <p>Startle effects are based on a combination of the speed of the train and the distance from the tracks. The projected distance of 45 feet within which startle may occur is based on the maximum train speed of 220 mph, which will not be achieved at all locations. According to FRA and FTA policy, for noise-sensitive locations identified within the distance where surprise may occur, the onset-rate adjusted sound levels are used to identify impact. For the Fresno to Bakersfield Section, the permanent project right-of-way is about 120 feet wide for at-grade sections, or approximately 60 feet from the track centerline. Therefore, the potential for surprise would occur only within the project right-of-way, as startle effects on noise-sensitive land uses would only occur within 45 feet from the track centerline. Because the right-of-way is approximately 60 feet from the track centerline, no noise-sensitive land uses would be within the distance where onset-rate adjusted sound levels would be applied. HST stations are not considered noise-sensitive, so additional annoyance from rapid onset rates at stations is not considered an impact; however, potential startle to patrons waiting on station platforms would be minimized with the use of audible and/or visual notification systems.</p>

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-04: Vibration Damage (Noise Damage)
<p>Commenters expressed concern for vibration damage to structures, soil, and crops. One comment on noise damage to crops is also included.</p>	<p>The vibration impact assessment is primarily designed to identify the potential for human annoyance from vibration from HST operations and for buildings with vibration-sensitive use as described by the FRA and FTA land use categories. However, all buildings in close proximity to the proposed alignments were assessed for potential structural damage from HST operations and/or construction. The potential for damage from vibration from HST operations is limited to extremely fragile building locations within 30 feet of the tracks. The HST right of way width varies from about 120 feet for at-grade tracks, to approximately 60 feet for elevated sections. In general, the area of impact is therefore within or close to the project right-of-way. Typical buildings, such as residences, located outside this distance would not have the potential for damage from vibration. As described in EIR/EIS Section 3.4, any buildings that have the potential for damage due to vibration would be within the HST right of way and, as a result, would be bought out.</p> <p>Agricultural resources, such as crops, would not be affected by noise and vibration from HSTs.</p> <p>As described in EIR/EIS Section 3.4.3, locations with potential vibration impacts in the project corridor are because of the potential for annoyance effects from HST operations. While the vibration at these locations might be felt by receptors, it would be well below the thresholds for damage to structures. It is helpful to note that the vibration levels generated by passing HSTs would generally be less than the levels generated by freight trains in the study area.</p>

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-05: Determining Mitigation
<p>Commenters expressed concern regarding mitigation options, how mitigation was determined, and how it will be implemented. Commenters requesting specific mitigation are also included.</p>	<p>At similar speeds high-speed trains generate significantly less noise than existing commuter and freight trains. This is primarily due to the use of electric power versus diesel engines, higher quality track interface, and smaller, lighter and more aerodynamic trainsets. The use of electric power units would not have the engine rumble associated with diesel-powered locomotives. While wheel/track interface is a significant source of train noise, HST track beds and rails are designed and maintained to very high geometric tolerances and standards which would greatly minimize track noise that is prevalent with existing commuter/freight tracks throughout the study area. Another reason HST noise impacts are less than commuter or freight trains is that high speeds would result in short duration noise events compared with conventional trains (a few seconds at the highest speeds versus 10 to 20 seconds for conventional passenger trains and well over 1 minute for freight trains). The HST System would be fully grade separated from all roadways. In the urban areas where potential for noise impacts is typically at the highest levels, the HST System is predominantly in or adjacent to existing rail corridors and the HST Alternative often includes the grade separation of the existing tracks. Grade separations completed with the HST System in corridors such as these would eliminate current horn sounding and bells at existing grade crossings and would result in a noise benefits that would offset much of the HST noise impacts.</p> <p>Potential noise impact has been assessed at sensitive receptors and these areas are identified in Section 3.4.5, Environmental Consequences, of the EIR/EIS and shown in Figures 3.4-9 through 3.4-13. The locations of potential barriers are illustrated on Figures 3.4-15 through 3.4-19. Refer to Section 3.4.7 for a complete listing of noise impact mitigation measures that would</p>

Comment Summary	Response
NOISE AND VIBRATION	FB-Response-N&V-05: Determining Mitigation
	<p>reduce noise impacts below a "severe" level. The proposed California High-Speed Train Project Noise and Vibration Mitigation Guidelines developed by the Authority (see Appendix 3.4-A of the EIR/EIS) were used to determine whether mitigation would be proposed for these areas of potential impact. The Guidelines require consideration of feasible and effective mitigation for severe noise impacts (impacts where a significant percentage of people would be highly annoyed by the HST Project's noise).</p> <p>If the Authority certifies the EIR/EIS and approves a Fresno to Bakersfield project, it will proceed with construction of the alignment and will implement all construction noise and vibration mitigation measures as construction is occurring. Noise and vibration mitigation measures that address impacts from high-speed train operations would be adopted and committed to in conjunction with project approval, but implemented closer in time to the commencement of project operations, and in consultation with affected communities.</p> <p>The Authority will refine mitigation for individual homes with residual severe noise impacts (i.e., severe impacts that remain notwithstanding noise barriers) and address them on a case-by-case basis. In addition to the potential use of noise barriers, other forms of noise mitigation may include improvements to the home itself that will reduce the levels by at least 5 dBA, such as adding acoustically treated windows, extra insulation, and mechanical ventilation as detailed in Section 3.4.7, Project Design Features.</p> <p>The EIR/EIS proposes noise barriers in areas of severe noise impacts resulting from the project, where the barriers meet the cost-effectiveness criteria contained in the proposed Noise and Vibration Mitigation Guidelines. To meet the cost-effectiveness criteria, barriers must mitigate noise for more than 10 sensitive receptors, be not less than 800 feet in length, be less than 14 feet in height, and cost below \$45,000 per benefitted receiver. A receiver that receives at least 5-dBA noise reduction due to the barrier is considered a benefitted receiver.</p> <p>Mitigation measure N&V-MM#3 provides that sound barriers may be installed to reduce noise to acceptable levels at adjoining properties. These may include walls, berms, or a combination of walls and berms. N&V-MM#3 provides that prior to operation, the Authority will work with communities regarding the height and design of sound barriers using jointly developed performance criteria, when the vertical and horizontal location have been finalized as part of the final design of the project infrastructure. Mitigation measure VQ-MM#6 requires the provision of a range of options to reduce the visual impact of the sound barriers.</p>

Comment Summary	Response
PUBLIC UTILITIES AND ENERGY	FB-Response-PU&E-01: Analysis of Traction Power Stations and Project Driven Transmission Line Upgrades
<p>The comments express concern that the modifications to existing electricity infrastructure required to power the HST Project, including the construction of new power lines or modification of PG&E and SCE power lines that would connect the project to existing substations, were not analyzed in the Draft EIR/EIS. Comments were received regarding compliance with General Order 131-D, which sets forth provisions that must be adhered to when public electric utilities construct any new electric generating plant or modify an existing electric generating plant, substation, or electric transmission, power, or distribution line. In addition, questions were raised about the substations proposed as project elements, particularly with regard to their land use requirements.</p>	<p>Proposed modifications to electrical facilities, including transmission line upgrades and additions, are discussed in Chapter 2, Alternatives, of the EIR/EIS, which describes the project elements. For example, Section 2.2.6, Traction Power Substations, explains that traction power substations (TPSS) would be located adjacent to the HST right-of-way and connect to local utilities in order to provide electricity for HST operations. Locations where new TPSS facilities or utility switching stations would need to be constructed in order to support HST operations have been included in the environmental footprint and analyzed in the EIR/EIS. This includes the TPSS facility, utility switching station, electrical connections between the TPSS site and switching station, electrical connections between the Overhead Contact System (OCS) on the HST System and the TPSS site, and radio towers. In some instances, the TPSS sites are in close proximity to an existing utility substation, so the construction of a separate utility switching station would not be required. In these instances, the utility substation and any necessary improvements and connections to the utility substation to support HST operations are included in the environmental footprint and analyzed in the EIR/EIS. In instances where TPSS facilities and utility switching stations are not in close proximity to existing utility substations, it is not currently known what, if any, potential transmission line upgrades or new transmission line construction might be required in order to provide sufficient infrastructure to deliver electricity to the HST System. The Authority is working closely with utility providers to assess the extent of potential grid improvements that may be required due to HST operations. If the Authority and utility providers determine improvements would be necessary that are outside the project footprint or beyond the analysis included in the EIR/EIS, additional environmental review would occur to evaluate any potential impacts associated with the improvements.</p>

Comment Summary	Response
PUBLIC UTILITIES AND ENERGY	FB-Response-PU&E-02: Electricity Supply Impacts
<p>Several comments question the ability of the region's existing electrical infrastructure to support the additional demand of the HST. Commenters suggest that brownouts and threats of blackouts are evidence that the existing infrastructure cannot support the added energy requirements of the HST.</p>	<p>California's electricity grid would power the proposed HST System. Management of California's electricity infrastructure and power supply includes demand forecasting, which include buffer, or reserve, electricity generating capacity above expected peak demand that is available to call upon as needed. The Fresno to Bakersfield Section of the HST is estimated to require 78 megawatts (MW) of peak demand, which is within existing reserves.</p> <p>The EIR/EIS provides information about the HST System energy demand in Table 3.6-18, allowing utility providers to consider it in their demand forecasts. No impacts to the supply of electrical power to existing users would be anticipated. The HST Project would not require the construction of a separate power source, although it would include the addition and upgrade of power lines to a series of substations positioned along the HST corridor. Please refer to the summary of electricity requirements in Section 2.2.6, Traction Power Distribution, in Chapter 2, Alternatives. Section 3.6.5.3, High-speed Train Alternatives, discusses how the energy demand would be met.</p> <p><i>Use of Renewable Energy</i></p> <p>The Authority's policy goal is to use 100% clean, renewable electricity for the operation of the HST. This goal can be achieved through purchase agreements with power suppliers, and through the design of project buildings and facilities to meet Leadership in Energy and Environmental Design (LEED) Silver Level certification. California utilities are required to achieve a state-mandated 33% renewable portfolio within the time frame of projected operation of the HST. This will offer new opportunities for obtaining clean, renewable energy from those sources. Further, the Authority has entered into a Memorandum of Understanding (MOU) with FRA, EPA, and the U.S. Department of Energy to support common sustainability goals. These include minimizing air and water pollution, energy usage, and other environmental impacts. This MOU is located on the Authority's website. The signatory agencies recognize that construction and operation of the HST System would require a large amount of energy, and that ample opportunities exist to promote energy efficiency and renewable energy.</p>

Comment Summary	Response
PUBLIC UTILITIES AND ENERGY	FB-Response-PU&E-03: Utility Coordination for Final Design
<p>Several local districts, municipalities, and state agencies wrote letters describing site-specific characteristics of their utility systems and requesting the opportunity to work with the Authority and FRA to identify and evaluate these resources. Comments also recommended coordination of plans to improve or expand utilities with local utility providers.</p>	<p>The Authority has made all reasonable efforts to identify the locations of all utilities within the project footprint but the designs presented in the EIR/EIS are based on preliminary engineering. The Authority is actively continues to work with utility owners to developed additional information on existing and planned utilities into project design. Many of the specific utility connection issues and relocation sites cannot be known until the Authority is closer to final design, and the utility or municipal services providers share information on the impact on their existing facilities. During the development of the final design, the Authority will coordinate to work with utility owners and local districts and agencies to refine this information, identifying and evaluating all known facilities needed during future design phases. The design will follow existing state law requiring use of a utility locator service and manual probing for buried utilities within the construction footprint prior to initiating ground disturbing activities. Where existing underground utility pipelines cross the HST alignment, the utilities will be placed in a protective casing.</p> <p>The Authority has also been meeting with local districts, municipalities, and other entities to develop agreements that will define terms and conditions to resolve utility conflicts, including appropriate funding by the Authority to reimburse costs incurred as a result of work associated with the HST Project.</p>

This page intentionally left blank.

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-01: Wildlife Habitat and Wildlife Movement Corridors
<p>Commenters questioned how road closures associated with the Shafter-Wasco alternative will impact wildlife corridors. Commenters also believed that impacts to wildlife corridors were inadequately analyzed and a baseline was not properly established for the study area.</p> <p>Commenters were concerned that culverts built for the project will not accommodate animals of all sizes. With regard to both animal size and general habitat use, commenters questioned the use of San Joaquin kit fox as a representative species.</p> <p>Commenters felt that additional mitigation measures were needed to address impacts to wildlife movement are needed.</p>	<p>In an effort to help guide landscape-level planning to maintain habitat connectivity among the patchy network of natural habitat that remains in the San Joaquin Valley, state- and regional-level studies addressing connectivity and wildlife movement in California have been conducted (Penrod et al. 2001; Penrod et al. 2003; ESRP 2009; USFWS 1998; Spencer et al. 2010). These sources represent the most recent and the best commercially available science on wildlife movement and migration corridors in the state of California. Detailed "empirical" surveys through camera trapping, track plates, radio telemetry, or complex landscape modeling were not called for in the Central Valley Biological Resources and Wetlands Survey Plan (Authority and FRA [2009] 2011a), nor were they practicable or feasible given the project's limited time-frame and private property site-access/permission-to-enter issues.</p> <p>Collectively, these studies identify seven major linkage areas that intersect the HST alternatives (shown on Figure 3.7-2 of the EIR/EIS) and that could serve as movement corridors at the following general locations:</p> <ul style="list-style-type: none"> • Kings River linkage (connectivity choke-point linkage). • St. John's River-Cross Creek linkage (landscape linkage). • SR 43/SR 155 linkage (missing linkage). • Tule River linkage (connectivity choke-point linkage). • Deer Creek-Sand Ridge linkage (connectivity choke-point/missing linkage). • Poso Creek linkage (missing linkage). • Kern River linkage (connectivity choke-point linkage). <p>All of the habitat linkages and wildlife movement corridors generally coincide with riparian corridors and natural land blocks, including Atwell Island, Allensworth State Historic Park, Allensworth Ecological Reserve, Pixley National Wildlife Refuge, Kern National Wildlife Refuge, and other protected natural lands (refer to Figure 3.7-4 Wildlife Movement Corridors). The surrounding landscape is comprised of urban development, agriculture, and crop land, which provide no value for most special-status and common wildlife species except marginal dispersal and foraging habitat. Outside of identified wildlife movement areas, especially in agricultural and crop land, terrestrial wildlife movement is expected to be highly localized. Therefore, for a project of this scale, the use of these resources accurately represents the baseline conditions and was deemed appropriate to address wildlife movement on a micro and macro scale. A detailed discussion of these linkages is available in Chapter 3.7, Biological Resources and Wetlands of the EIR/EIS, as well as in Section 5.7, Migration and Movement Corridors of the Fresno to Bakersfield Section Biological Resources and Wetlands Technical Report.</p> <p>Several engineering design features of the project would facilitate wildlife crossing opportunities across the seven major linkages, the most extensive of which are dedicated wildlife crossing structures. The Authority and FRA identified these engineering design features to incorporate into project design to avoid potential project impacts. The location of dedicated wildlife crossing structures and other structures that would facilitate wildlife crossings is shown on Figure 5-7c of the Fresno to Bakersfield Section Biological Resources and Wetlands Technical Report.</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-01: Wildlife Habitat and Wildlife Movement Corridors
	<p>These structures were proposed early in project design, as part of the project description rather than as a mitigation measure, in recognition of the importance of maintaining wildlife movement permeability across the project alignment and to avoid potential project impacts. Dedicated wildlife crossing structures were designed in collaboration with mammalogist and San Joaquin kit fox expert Dr. Brian L. Cypher, PhD, an Associate Director and Research Ecologist with California State University-Stanislaus and the Endangered Species Recovery Program. Dr. Cypher was consulted during the initial design of the dedicated wildlife crossing structures to identify appropriate openness factors, topographic elevation, maximum and minimum height and width requirements, as well as the minimum spacing frequency of structures in identified wildlife movement areas to account for behavior, home range, and seasonal movement/dispersal. The San Joaquin kit fox was chosen as the key representative for medium-sized mammal species upon which to model a typical wildlife crossing structure due to its sensitive status in the San Joaquin Valley. Dedicated wildlife crossing structures would be provided from approximately Cross Creek (Kings County) south to Poso Creek (Kern County), which includes both the SR 43/SR 155 and Allensworth area linkages, in at-grade portions of the railroad embankment at approximately 0.3-mile intervals. The 0.3-mile spacing was designed so that there is at least one crossing structure approximately 6 km² in size per average San Joaquin kit fox home range. At 0.3-mile spacing, this provides approximately six crossing opportunities per home range of the San Joaquin kit fox, which should also allow ample crossing opportunities for other species with larger home ranges, such as the coyote. Collectively, these structures would help minimize potential obstruction to wildlife movement due to the placement of permanent structures and permanent road closures related to the project. They would also help maintain the connectivity that identified linkages provide between protected public lands.</p> <p>Other engineering design features that would avoid or minimize impacts and facilitate wildlife crossing opportunities include elevated portions of the alignments, bridges over riparian corridors, road overcrossings and undercrossings, and drainage facilities (i.e., large-diameter [60-120 inches] culverts and paired 30-inch culverts). Where these features coincide with proposed dedicated wildlife crossing structures, they would serve the function of and supersede the need for dedicated wildlife crossing structures. There are elevated structures proposed over the five riparian linkages: the Kings River, St. John's River-Cross Creek, Tule River, Poso Creek, and Kern River linkages. In addition, dedicated wildlife crossing structures would be placed between 100 and 500 feet to the north and south of the elevated structures along these riparian linkages. These features would minimize disturbance to natural habitat and therefore minimize disturbance to wildlife usage of these linkages.</p> <p>Several commenters questioned the determination that the Allensworth Bypass would be less detrimental on wildlife movement than the corresponding segment of the BNSF Alternative. As explained in Section 3.7 Biological Resources, of the EIR/EIS the Allensworth Bypass Alternative would be less detrimental to wildlife movement because it is located outside of existing wildlife movement barriers. Currently, SR 43 and BNSF railroad significantly reduce wildlife movement along the SR 43/SR 155, Deer Creek-Sand Ridge, and Poso Creek linkages. Construction of the BNSF Alternative would create an additional barrier and compound the effects associated with the existing barriers. Even with the inclusion of dedicated wildlife movement structures (as described in Chapter 2), the potential for wildlife to successfully transverse the HST, BNSF railroad and SR 43 is very low and</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-01: Wildlife Habitat and Wildlife Movement Corridors
	<p>implementation of the BNSF Alternative would adversely affect local and regional wildlife movement. Wildlife movement west to east would occur through a HST dedicated wildlife movement structure and place an animal near the berm of the BNSF railroad (visibility through the structure would not be of open land, but rather the berm of the BNSF), and then would cross over the BNSF and then cross over SR 43. Likewise for animal moving east to west would have to cross over SR 43, the BNSF railroad and then enter one of the dedicated wildlife movement structures.</p> <p>As described in Chapter 5.7.4.2: Construction Avoidance and Minimization Measures in the Fresno to Bakersfield Biological Resources and Wetlands Technical Report, the project "design plans will be further refined to identify optimal wildlife-friendly crossing locations within linkages in the Allensworth area (i.e., the SR 43/SR 155 and Deer Creek-Sand Ridge linkages) to maintain or enhance crossing, dispersal, and migration opportunities for wildlife across the HST alternatives." While the Allensworth Bypass would establish a new wildlife movement barrier, and further fragment the existing linkages, the inclusion of dedicated wildlife movement structures would provide opportunity for wildlife to move across the HST, and would not be faced with the compounding affects or hazards (risk of strikes with trains, cars) of crossing additional barriers. The existing barriers associated with BNSF railroad and SR 43 would remain and wildlife movement would continue as it does under the existing condition. The visibility through the Allensworth dedicated wildlife movement structures would be of agricultural and natural landscapes and animals would not be faced with the disturbances associated with the BNSF railroad or SR 43.</p> <p>Other commenters request inclusion of dedicated wildlife movement structures under the BNSF railroad and SR 43. Improvements to existing transportation infrastructure, including wildlife movement structures, within linkages and corridors in the HST project area would be planned and constructed by other agencies under projects other than the HST project, and would be funded through separate funding sources. The California High Speed Rail Authority is the state entity responsible for planning, constructing, and operating the HST System. Local municipalities, counties, the California Department of Transportation (Caltrans), and BNSF are responsible for planning, constructing, and maintaining the roadway and railroad infrastructure that currently limit wildlife movement. The HST project would provide wildlife movement opportunities through a variety of engineered structures (as described above).</p> <p>The construction period impacts to wildlife movement associated with the HST Alternatives are temporary and would only result in a partial barrier to wildlife movement. During project construction, mitigation measures would be implemented as described in the EIR/EIS (see Section 3.7.7) to reduce potential construction period impacts to wildlife movement and linkages. These measures state that wildlife movement linkages would be kept free of all equipment, storage materials, construction materials, and any significant potential impediments and that ground-disturbing activities would be minimized within the wildlife linkages during nighttime hours to the extent practicable.</p> <p>Mitigation measures BIO-MM#51 and BIO-MM#52 would serve to reduce construction and project period impacts to wildlife movement. However, while the incorporation of wildlife crossing structures and other mitigation</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-01: Wildlife Habitat and Wildlife Movement Corridors
	measures may minimize impacts to wildlife movement throughout the entire project length, the FRA and Authority recognizes that these measures do not substantially reduce the level of potential impact; therefore, as described in Section 3.7.8, NEPA Impacts Summary, and Section 3.7.9, CEQA Significance Conclusions, in the Biological Resources Section of the EIR/EIS, under NEPA the intensity of permanent effects to wildlife movement from the project were identified as substantial, and under CEQA the level of significance of impacts to wildlife movement corridors after mitigation were identified as significant.

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-02: Mitigation Measures (Resources, Details and Phasing, Responsibilities and Future Planning)
<p>Commenters expressed concern that the mitigation measures are written in a way that implies that they are optional. One commenter expressed concern that the EIR/EIS fails to identify mitigation measures that will be applied to mitigate impacts on each biological resource that would potentially be affected by the section. The commenter also expressed concern that the EIR/EIS fails to specify requirements for measures designed to avoid or reduce impacts on biological resources. Commenters are concerned that, at this stage, we cannot determine how future plans (such as permits) would reduce impacts.</p>	<p>The Fresno to Bakersfield EIR/EIS identifies project design features and mitigation measures that the Authority and FRA have determined will avoid, minimize, reduce and mitigate potential adverse impacts resulting from project construction and operation. These mitigation measures and project design features will be tracked and enforced through the Mitigation Monitoring and Enforcement Plan (MMEP), a joint monitoring program that satisfies the requirements of both CEQA and NEPA. In addition, mitigation measures will be incorporated into and enforced by the Clean Water Act Section 404 permit issued by the U.S. Army Corps of Engineers (USACE). The Section 404 permit will include these mitigation measures as permit conditions. The Authority has prepared a Compensatory Mitigation Plan (CMP) that identifies potential properties that could be preserved, enhanced, or restored to offset impacts on biological resources and wetlands. Following site selection and acquisition, a site specific Comprehensive Mitigation and Monitoring Plan (CMMP) will be prepared.</p> <p><i>MMEP</i></p> <p><u>The Authority and FRA will develop an MMEP to ensure that the adopted project design features and mitigation measures are successfully implemented and tracked throughout project implementation.</u></p> <p>CEQA requires a lead or public agency that approves or carries out a project for which an environmental impact report has been certified which identifies one or more significant adverse environmental effects and where findings with respect to changes or alterations in the project have been made, to adopt a "...reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment" (CEQA, Public Resources Code sections 21081, 21081.6).</p> <p>Similarly, federal agencies are required to take steps to ensure that mitigation commitments are implemented. Based on the requirements of 40 CFR 1500 through 1508, the Council on Environmental Quality (CEQ) issued final guidance in 2011 for federal departments and agencies on the appropriate use of mitigation in Environmental Assessments (EAs) and EISs (76 FR 3843 Jan. 21, 2011). This guidance requires a comprehensive approach to mitigation planning, implementation, and monitoring.</p> <p>The Authority as CEQA lead agency, and FRA as NEPA lead agency, will use the MMEP to track and enforce implementation of mitigation measures and project design features.</p> <p>The MMEP will be active through all phases of the project, including design, construction, and operation. The project will be developed in phases and may include permits required for implementation of project components. There are mitigation measures that must be continuously implemented throughout the development and operation of the HST Project.</p> <p>The MMEP identifies those mitigation measures required by the CHSRA to mitigate or avoid significant adverse impacts associated with the implementation of the proposed project, entity responsible for monitoring, timing of</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-02: Mitigation Measures (Resources, Details and Phasing, Responsibilities and Future Planning)
	<p>implementation, phase the measure applies to, timing of implementation and completion verification. The MMEP will help ensure the measures are implemented, their effectiveness monitored and documentation provided. As individual mitigation measures are completed, the compliance monitor will sign and date the MMEP, indicating that the required mitigation measure has been completed for the subject period. The compliance monitor will also note the documentation (title of the monitoring report) that was submitted for each mitigation measure. Although the MMEP is specifically required by CEQA and CEQ for purposes of implementing NEPA, often times the monitoring effort is appropriately expanded to include the permit conditions associated with the Federal Clean Water Act, Porter Cologne Act, State Fish and Game Code, Federal and State Endangered Species Acts and any requirements necessary to comply with Section 106 of the Historic Preservation Act. These other regulatory requirements will result in obtaining various permits that will include often times more specific terms and conditions that may be treated as mitigation measures and tracked through similar procedures as the MMEP. In many instances they are all combined into one tracking program.</p> <p>The mitigation measures have been designed to mitigate impacts to biological resources and rely, in some instances, on the preparation and execution of plans following the certification of the document. However, the mitigation measures that contain plans also identify the specific content and performance that will be included in such plan. With implementation of the MMEP, biological resources avoidance, minimization, and mitigation will be achieved. As an example, BIO-MM#17 includes the types of activities that need to be addressed (e.g.; monitoring, salvage, relocation, and propagation), how the plan would be approved and who would approve the movement of species (e.g., Project Biologist, and appropriate regulatory agencies), and the provisions that will be provided in the plan for the establishment of plant population(s) and performance (success) criteria. As stated in mitigation measure BIO-MM#1, a Project Biologist, Contractor's Biologist, and Project Biological Monitors will be designated by the Authority. The appropriate designated biologists would be responsible for implementation and compliance with certain measures (as described in each measure).</p> <p>Although no section of the Final EIR/EIS specifically discusses each individual measure and its effect on mitigating each individual impact, the descriptions provided in Sections 3.7.5, 3.7.7.2 and 3.7.7.3 of the EIR/EIS serve to describe both impacts and their mitigation measures as fully as possible to the reader. Section 3.7.9, Table 3.7-21 of the EIR/EIS ties construction and project impacts to specific mitigation measures that will be implemented to avoid, minimize, rectify, or compensate for impacts on biological resources could mitigate specific impacts is provided in Section 3.7.9. Together, the mitigation measures would map and identify sensitive biological resources, create buffers around these resources, allow for passive and active species relocation, restore temporarily disturbed areas (where possible), compensate for unavoidable impacts, monitor construction (to name a few). Other measures are general in nature and were designed specifically to reduce the level of anticipated direct or indirect impacts on a number of resources.</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-02: Mitigation Measures (Resources, Details and Phasing, Responsibilities and Future Planning)
	<p><i>CMP</i></p> <p>The Compensatory Mitigation Plan (CMP) has a more focused and specific role than the MMEP and is the beginning of the mitigation strategy. A CMP is being prepared as part of the Section 404 permitting process under the requirements of the USACE and EPA, and in accordance with the MOU between the Authority, FRA, and these agencies. The CMP will provide the methods and a foundation for the mitigation options that are available to offset the loss of sensitive natural resources within the Fresno to Bakersfield Section. Compensatory mitigation includes purchase of mitigation bank credits; fee-title acquisition; conservation easements; in-lieu fee payments; and conservation projects to create, restore, or enhance habitats. These compensatory mitigation programs address resources, including special-status species, both plants and wildlife, streambed/riparian communities, other wetlands such as vernal pool/seasonal wetlands, and wildlife movement corridors.</p> <p>Water rights and availability are included as part of the feasibility analysis presented in the CMP. Specifically, the feasibility analysis includes conceptual design for the prospective wetland mitigation sites.</p> <p>The methods for reducing, avoiding, or compensating for potential impacts discussed in the CMP include a watershed-based approach, site selection criteria, the use of the CRAM to document wetlands, mitigation by resource, long-term management, financing, and monitoring. In addition, the CMP provides an inventory of banks and projects in the area that may provide compensatory mitigation for offsetting effects. While the CMP is not part of the EIR/EIS, it will incorporate and/or complement many of the mitigation measures identified in Section 3.6.6.</p> <p>As part of the Section 404 process, all proposed compensatory mitigation will be prepared under federal agency oversight. Only USACE and EPA approved mitigation projects and programs will be used to fulfill mitigation requirements.</p> <p>The CMP will present the mitigation proposal for mitigating impacts on sensitive habitats, plants, and wildlife resulting from construction of the Preferred Alternative, and will provide a proposal detailing the locations where mitigation is proposed to occur and the strategy proposed to implement mitigation to meet the requirements and standards of the various environmental regulatory agencies with jurisdiction over the project. The CMP along with a Watershed Evaluation Report will also use land acquisition strategies that consider watershed-level impacts when proposing mitigation, giving priority to areas that provide habitat connectivity and those areas with upland and wetland restoration and creation potential.</p> <p>The CMP will specify the quantity of acres/credits used to offset project effects, by resource, as specified by the mitigation ratios described in the CMP. The overall mitigation strategy will consider the structural requirements of the agencies, use of umbrella species to provide mitigation for other species with similar habitat requirements, and the FEIR/FEIS mitigation commitments.</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-02: Mitigation Measures (Resources, Details and Phasing, Responsibilities and Future Planning)
	<p><i>CMMP</i></p> <p>Implementation of mitigation measure BIO-MM#62: Prepare and Implement a site-specific Comprehensive Mitigation and Monitoring Plan (CMMP) will provide specific plans and details for mitigation sites that are selected in cooperation with regulatory agencies, including the U.S. Army Corps of Engineers, US Fish and Wildlife Service, State Water Resources Control Board, and California Department of Fish and Wildlife. The CMMP will identify specific performance and/or success criteria, which will largely depend on the specific goals of the particular mitigation site. Please see mitigation measure BIO-MM#62 in Section 3.7.7 of the EIR/EIS for more detail.</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-03: General Response for Surveys Conducted to Inform the EIR/EIS, and use of Preconstruction and Protocol-level Surveys as Mitigation
<p>Commenters expressed concern that focused surveys were not conducted for biological resources, and therefore the EIR/EIS does not provide adequate biological resources baseline information or impacts analysis. Mitigation measures that require pre-construction and/or protocol surveys for biological resources are not mitigation and should have been conducted prior to preparation of the DEIR/EIS. Commenters expressed concern that field studies were only completed for a portion of the study area.</p>	<p><i>Biological Resources Baseline - Literature, and Data, Surveys, and Assumptions</i></p> <p>The baseline conditions for biological resources in the EIR/EIS were established using numerous data sources to define the existing physical conditions in the project vicinity. These data sources, discussed in Section 3.7.3.2, include a tremendous amount of existing information found with the California Natural Diversity Database, the California Native Plant Society Online Inventory of Rare and Endangered Plants of California, California Wildlife Habitat Relationship System, USFWS Recovery Plans, and USFWS Birds of Conservation Concern. For jurisdictional waters, many existing resources were consulted including the National Wetlands Inventory, Natural Resource Conservation Service Hydrologic Unit Code Basins dataset, National Hydrography dataset, and Holland Central Valley Vernal Pool Complexes data layer, among others. Wildlife movement corridors were identified through additional review of published technical data available from regulatory agencies.</p> <p>The assimilation of existing data and literature regarding existing biological conditions in the project area was supplemented with data developed during extensive field surveys that were conducted on all parcels where the Authority was able to obtain permission to enter the property. These surveys include but are not limited to wetland delineations, special-status plants surveys, and wildlife habitat mapping surveys. These surveys were conducted to map, quantify and identify the extent of biological resources within the study area, according to the methods described in the Central Valley Biological Resources and Wetland Survey Plan (2009), which was developed at the request of, and transmitted to natural resources regulatory agencies (Environmental Protection Agency, U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Army Corp of Engineers, California Department of Fish and Game, and the Central Valley Regional Water Quality Control Board). The Authority met with the regulatory agencies to receive verbal input regarding the methods on November 5, 2009. Over the course of next couple of months the Authority received formal and informal comments from regulatory agencies. Most of the comments</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-03: General Response for Surveys Conducted to Inform the EIR/EIS, and use of Preconstruction and Protocol-level Surveys as Mitigation
	<p>and suggested revisions received were incorporated into the subsequent revision to the Central Valley Biological Resources and Wetland Survey Plan (Authority 2011a).</p> <p>Special-status plant and special-status plant community surveys were conducted in 2010 and 2011 in accordance with CNPS, USFWS, and CDFG guidelines for special status plant and plant community surveys. Wildlife habitat mapping was conducted in 2010 and 2011 utilizing the California Wildlife Habitat Relationship System (CWHR).</p> <p>The CWHR provides for mapping habitat and land uses which are crossed walked with the species known geographic range to determine suitable habitats for special-status wildlife species. This system is a widely used tool, and the approach assumes presences of special-status wildlife species in areas where suitable habitat occur (as identified in the CWHR or other published agency literature). This approach is widely used in California on large infrastructure projects and other projects where permission to enter is limited, and provides a reasonable and consistent approach to the assessment of potential for wildlife presence/absence (even without protocol-level surveys) and allows for a reasonable identification of potential impacts and an appropriate comparison of the HST alternatives. The net result is a conservative approach that requires implementation of mitigation measures, including requirements to conduct protocol-level surveys prior to ground disturbance, but after the Authority has acquired the property associated with the construction and project footprint. Due to project schedule and limited access to subject properties, protocol-level surveys for special-status wildlife species were not proposed or conducted. However, jurisdictional waters were delineated in 2010 and 2011 in accordance with U.S Army Corps of Engineers procedures. Details on survey methodology are presented in the Fresno to Bakersfield Section Biological Resources and Wetlands Technical Report which is available on the Authority's website.</p> <p>Surveys to identify biological resources within the project footprint were conducted on-site where access was available, either through public right-of-ways or in areas where permission to enter was granted by private landowners. In areas where permission to enter was not granted, public right-of-ways were used to visually assess inaccessible areas, wherever possible. In areas where no access was available, high-resolution aerial photo interpretation and image processing techniques were used to map the extent of biological resources (e.g., wildlife habitats, jurisdictional waters). For areas that were not surveyed on-site, biological resources were mapped conservatively to include areas potentially containing biological resources based on the judgment of the project biologists. The collective body of baseline information developed for property where no permission for access was granted, including the results of the aerial photograph interpretation survey areas, provided an adequate baseline to inform the environmental analysis and mitigation strategy. Information regarding the condition of jurisdictional waters was obtained through application of the California Rapid Assessment Method (CRAM) at select sites where Authority was able to obtain permission to enter the property. Additional information on access and survey limitations is presented in Section 3.7 of the Fresno to Bakersfield Section Biological Resources and Wetlands Technical Report.</p> <p>Although the majority of the surveys were conducted up to four years prior to the publication of the Final EIR/EIS,</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-03: General Response for Surveys Conducted to Inform the EIR/EIS, and use of Preconstruction and Protocol-level Surveys as Mitigation
	<p>the survey data is still valid as the existing conditions have not substantially changed during this period. Additionally, as newer aerial photography has become available, wetland data has been checked and re-analyzed to estimate field conditions. Biological resource and wetlands identified during these surveys are likely still present in the study area. Because of the conservative approach, the existing conditions and impact analysis appropriately inform the environmental document. Because permission to enter was not received or ever anticipated across the entire study area, a direct comparison of field survey data could not be conducted across or between HST Alternatives. Therefore, a conservative approach was taken to apply the same level of impact analysis across all alternatives regardless of permission to enter status. The conservative approach to impact analysis assumes presence of special-status species within their range where suitable habitat exists, which results in a direct comparison of impacts to each special status species. This approach is common among infrastructure projects in the State of California. This adequate and conservative impact analysis provides a worst-case scenario for analyzing impacts, and maximizes compensatory mitigation requirements.</p> <p>The baseline conditions identified in Section 3.7 Biological Resources and Wetlands and the associated impact analysis provides a sufficient level of information as required by CEQA and NEPA. Baseline conditions are described in Section 3.7.4 Affected Environment, including descriptions of the regional setting, plant communities and land cover types (terrestrial and aquatic communities), native fauna assemblage, special-status species (Tables 3.7-3 and 3.7-4 and Appendix 3.7-A), habitats of concern (e.g. special-status plant communities, jurisdictional waters, critical habitat, essential fish habitats, conservation areas, and protected trees), and wildlife movement corridors. Discussion of impacts to biological resources includes full descriptions of the type of impacts that are anticipated to occur and the mechanisms by which these would occur for each of the HST Alternatives and the associated biological resources.</p> <p>Some comments suggest that protocol-level surveys are required to establish an adequate environmental baseline for biological resources. Other comments suggest that some level of on-site survey of every parcel is required for an adequate baseline. Neither NEPA nor CEQA require a lead agency to perform on-site surveys on every parcel to establish an adequate environmental baseline; rather, an EIR/EIS must disclose what it reasonably can (CEQA Guidelines, § 15144; NEPA Regulations, 40 C.F.R. §1502.15, 40 C.F.R. §1502.22). Considerable, repeated efforts were made to obtain permission to access private property and surveys were performed on all properties where permission for access was affirmatively granted.</p> <p><i>Preconstruction and Protocol-level, and Focused Surveys as Mitigation Measures</i></p> <p>Preconstruction, protocol-level, and focused surveys would be conducted prior to construction and ground disturbing activities and required as part of the Project's MMEP. Preconstruction surveys are general in nature and are conducted immediately prior to ground disturbing activities. Protocol-level surveys are surveys for special-status biological resources where agencies have an approved published survey method. These surveys would be conducted prior to construction, in advance of construction activities. Focused surveys are proposed for species for</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-03: General Response for Surveys Conducted to Inform the EIR/EIS, and use of Preconstruction and Protocol-level Surveys as Mitigation
	<p>which there are no approved survey methods or where alternative methods are proposed.</p> <p>Because protocol-level wildlife species surveys were not performed during biological resource surveys for the EIR/EIS, they have been included as mitigation measures to confirm locations of sensitive biological resources before the start of ground-disturbing activities.</p> <p>As provided in mitigation measures (BIO-MM#16, BIO-MM#18, Bio-MM#21, BIO-MM#22, BIO-MM#24, BIO-MM#26, BIO-MM#29, BIO-MM#30, BIO-MM#32, BIO-MM#35, Bio-MM#37, BIO-MM#40, BIO-MM#43, and BIO-MM#45), upon acquisition of land and/or permission to enter, surveys for all special-status plant and wildlife species and their habitat would be conducted before any project construction activities would occur. Surveys for special-status plant species and special-status plant communities would be conducted during appropriate blooming periods (BIO-MM#16). Protocol-level surveys for valley elderberry longhorn beetle (BIO-MM#21), California tiger salamander (BIO-MM#24), blunt-nosed leopard lizard (BIO-MM#26), Swainson's hawk (BIO-MM#32), burrowing owls (BIO-MM#35), and San Joaquin kit fox (BIO-MM#45) would be performed in areas within the species range and in areas with potential habitat for these species.</p> <p>Preconstruction and focused surveys following methods described in the EIR/EIS would also be conducted for vernal pool fauna (BIO-MM#18), special-status reptile and amphibian species (BIO-MM#22), birds and their nests protected under the Migratory Bird Treaty Act (BIO-MM#29), raptors (BIO-MM#30 and BIO-MM#32), small mammals (including Nelson's antelope squirrel, Tipton kangaroo rat, Dulzura pocket mouse, Tulare grasshopper mouse, and Fresno kangaroo rat) (BIO-MM#37), special-status bat species, American badger, and ringtail (BIO-MM#40, and BIO-MM#43).</p> <p><i>Avoidance and Minimization Management Techniques</i></p> <p>The mitigation measures also prescribe management techniques if species are detected (establishment and implementation of seasonal avoidance, establishment of buffers, etc.), as well as techniques to ensure species do not access the project site (BIO-MM#7, establishment of Environmental Sensitive Areas, BIO-MM#8 and wildlife exclusion fencing). In the event that any special status species are detected in work areas construction activities would be stopped (BIO-MM#13) and if accidental "take" of special-status species occur, the appropriate regulatory agencies would be notified (BIO-MM#14). A number of existing USFWS and CDFW guidelines would be implemented in areas where preconstruction, protocol-level or focused surveys identify special-status species. These measures would avoid, minimize and or compensate for the unavoidable impacts to special-status species or their habitat. Specifically, the measures include implementation of conservation guidelines for the Valley Elderberry Longhorn Beetle (BIO-MM#21), establish buffers and restrict construction activities for Swainson's hawks (BIO-MM#33), avoid and minimize impacts to burrowing owls (BIO-MM#36), relocate small mammals (BIO-MM#38, BIO-MM#39), and minimize impacts on San Joaquin kit fox (BIO-MM#46).</p>

Comment Summary	Response
BIOLOGICAL RESOURCES	FB-Response-BIO-03: General Response for Surveys Conducted to Inform the EIR/EIS, and use of Preconstruction and Protocol-level Surveys as Mitigation
	<p>Project-specific mitigation measures would also be implemented to avoid, minimize or compensate for impacts on biological resources. These measures include salvage, relocation and/or propagation of special-status plant species (BIO-MM#17), implementing seasonal work restrictions in vernal pools (BIO-MM#19), conduct reptile and amphibian monitoring, avoidance, and relocation (BIO-MM#23), implement avoidance and minimization measures for California Tiger Salamander (BIO-MM#25), avoid take of blunt-nosed leopard lizards (BIO-MM#28), establish exclusion areas for breeding birds (BIO-MM#29), monitor raptor nests (BIO-MM#30), avoid and minimize impacts to mammals (BIO-MM#38, BIO-MM#39, BIO-MM#41, BIO-MM#42, and BIO-MM#44), and monitor and establish buffers around protected trees (BIO-MM#50).</p> <p><i>Compensatory Mitigation</i></p> <p>Compensatory mitigation would be established through implementation of a numerous mitigation measures, including: restoration of temporary impacts on riparian areas (BIO-MM#47), jurisdictional waters (BIO-MM#48), and compensation for impact to protected trees (BIO-MM#50), special-status plants species (BIO-MM#53), vernal pool fairy shrimp and vernal pool tadpole shrimp (BIO-MM#54), valley elderberry longhorn beetle (BIO-MM#55), California tiger salamander (BIO-MM#56), blunt-nosed leopard lizard, Tipton kangaroo rat and Nelson's Antelope Squirrel (BIO-MM#57), Swainson's hawk (BIO-MM#58), burrowing owl (BIO-MM#59), San Joaquin kit fox (BIO-MM#60), riparian areas (BIO-MM#61), jurisdictional waters (BIO-MM#63) and protected trees (BIO-MM#64).</p> <p>By conducting preconstruction surveys closer to the initiation of construction, biological resources that have recently colonized the study area can be detected and will be more accurate. Additionally, pre-construction surveys provide an opportunity to survey those parcels where permission to enter was not granted by land-owners previously. Preconstruction surveys are a standard requirement for permits issued by regulatory agencies and are included, in part, in anticipation of this requirement. Preconstruction surveys are also included as mitigation measures because they could not be conducted as part of the EIR/EIS. Because preconstruction surveys would identify specific locations of biological resources that are otherwise assumed to be present in the EIR/EIS, individuals or populations could then be avoided, or effects could be minimized by implementing other EIR/EIS mitigation measures. These mitigation measures (BIO-MM#16, BIO-MM#18, BIO-MM#21, BIO-MM#22, BIO-MM#24, BIO-MM#26, BIO-MM#29, BIO-MM#30, BIO-MM#32, BIO-MM#35, BIO-MM#37, BIO-MM#40, BIO-MM#43, and BIO-MM#45) would contribute to site-specific identification of biological resource and contribute toward the mitigation of impacts identified in the EIR/EIS.</p>

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	FB-Response-HWR-01: Water System Impacts – District
<p>Many commenters discussed potential impacts on water delivery from district facilities (in contrast to on-farm irrigation systems, addressed under Agriculture). These comments expressed concerns about interruptions to water deliveries. District commenters also discussed other types of impacts, especially loss of revenue.</p>	<p>Several local districts and municipalities wrote letters describing site-specific characteristics of their water distribution, flood control, and drainage systems, and discussed several means by which their operations could be financially affected by the HST Project. All site-specific information, including water systems, has been shared with the project engineers so that the designers can address utility relocations and retrofits in the HST design plans and cost estimates. Most of this information was already collected as part of early utility investigations and is incorporated into the preliminary design and the EIR/EIS (e.g., EIR/EIS Section 3.6, Public Utilities and Energy). Prior to construction, the Authority would continue to work with utility owners and positively locate public utilities within the potential impact area. This would be done by probing, potholing, using electronic detection, reviewing as-built designs, or other means. EIR/EIS Section 3.6.5 provides complete information on project impacts on public utilities and energy. Additionally, the discussion in the Conflicts with Existing Utilities subsection provides information on what the Authority would do to relocate utilities or protect them in place. Project cost estimates include the estimated cost of utility relocations as well as protective measures. These costs will be refined as the project design progresses.</p> <p>As indicated by several of the commenters, the HST alignment could reduce project-area water district revenues. At this time, the Authority (working through the Project Management Team) is meeting with local districts, municipalities, and other entities (e.g., pipeline owners) to develop Master Utility Agreements (MUAs). These MUAs will define terms and conditions whereby the Authority would work with local agencies to resolve utility conflicts, including funding contributions by the Authority to reimburse costs incurred as a result of the HST Project (see also FB-Response-AG-02 regarding access severance). However, changes in district revenues as a result of the project are highly speculative and in the CEQA/NEPA context, are not impacts to the natural or human environment and do not need to be analyzed in the EIR/EIS. Districts would not be compensated for loss of property tax revenues resulting from the acquisition of land for a public purpose.</p> <p>Specific meetings held with project-area water districts are as follows:</p> <ul style="list-style-type: none"> • Corcoran Irrigation District - 3/17/2010, 9/12/2012 • Fresno Irrigation District - 4/20/2010 • Kings County Water District - 4/19/2011, 6/7/2011 • Last Chance Water Ditch Company - 1/12/2012, 8/22/12, 1/30/2013 • People's Ditch Company - 1/12/2012, 8/22/12, 1/30/2013 • Laguna Irrigation District - 1/12/2012, 8/30/12, 10/9/2012 • Murphy Slough Association - 1/12/2012, 8/30/2012 • Liberty Canal Company - 8/30/2012 • Shafter-Wasco Irrigation District - 9/10/2012, 10/4/2012

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	FB-Response-HWR-01: Water System Impacts – District
	<ul style="list-style-type: none"> • Angiola Water District - 9/12/2012 • Alpaugh Irrigation District - 9/12/2012 • Corcoran Irrigation Company - 9/12/2012 • Pixley Irrigation District - 9/13/2012 • Lower Tule River Irrigation District - 9/13/2012, 10/10/2012 • Cross Creek Flood Control District - 9/20/2012, 10/10/2012 • Tulare Lake Drainage District - 9/20/2012 • Lakeside Irrigation Water District - 9/20/2012, 1/30/2013 • Lakeside Ditch Company - 9/20/2012 • Consolidated Irrigation District - 9/20/2012, 10/10/2012 • Southern San Joaquin Municipal Utility District - 10/4/2012 • Vaughn Water Company - 10/4/2012 • California Water Service Company - 10/4/2012 • Semitropic Water Storage District - 10/4/2012 • North Kern Water Storage District - 10/4/2012 • Kings River Conservation District - 10/29/2012 • Kings River Water Association - 10/29/2012 • Kern County Water Agency Improvement District No. 4 - 10/29/2012 • Rosedale Rio Bravo Water Storage District - 10/29/2012 • Cawelo Water District - 10/29/2012 • Fresno Metropolitan Flood Control District - 1/11/2013

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	FB-Response-HWR-02: Site-Specific Drainage Impacts
<p>Several comments addressed the issue of the HST causing site-specific drainage impacts due to inadequate drainage design.</p>	<p>Several commenters raised concerns about changes in local drainage patterns causing site-specific drainage impacts as a result of inadequate drainage. The analysis in the EIR/EIS was based on the preliminary level of design sufficient to understand the basic project features, including the alignment plan and profile, roadway-crossing footprints, and basic estimates of construction means and methods. Typical HST alignment cross sections provide for drainage swales or culverts along the alignment (e.g., Figure 2-6 in the EIR/EIS), which would be sized to accommodate project runoff and provide stormwater conveyance. The EIR/EIS was further informed by a project-wide Hydrology, Hydraulics, and Drainage Report (Authority and FRA 2012c), Floodplain Impacts Report (Authority 2012b), Stormwater Quality Management Report Authority 2012d), and Hydrology and Water Resources Technical Report (Authority and FRA 2012d), available on the project website and by the HST design criteria described in the system-wide Hydraulics and Hydrology Design Guidelines Technical Memorandum (TM 2.6.5), also available on the project website (Authority 2011c). Section 3.8.6 of the EIR/EIS describes the project design features that provide for stormwater management and treatment, flood protection, construction stormwater pollution prevention, and industrial stormwater pollution prevention. These project design features are used to reduce and minimize potential impacts to local drainage patterns from the project impacts.</p> <p>Section 3.8.6 of the EIR/EIS and the above mentioned technical reports address basic approaches to minimizing drainage impacts, including floodplain management and stormwater quality control consistent with the following laws, regulations, and design standards.</p> <ul style="list-style-type: none"> • Executive Order 11988 - Floodplain Management (U.S. Department of Transportation Order 5650.2) • Hydraulics and Hydrology Design Guidelines Technical Memorandum (TM 2.6.5) • Caltrans' <i>Storm Water Quality Handbook: Project Planning and Design Guide</i>, for evaluation, selection and design processes of BMPs • American Railway Engineering and Maintenance of Way Association (AREMA) Manual for Railway Engineering: <ul style="list-style-type: none"> ○ Chapter 1, Part 1 for design of open channels adjacent to the tracks ○ Chapter 1, Part 3 for scour and erosion protection measures ○ Section 4.8.3.2 for design of culverts with outlet control • Caltrans Highway Design Manual: <ul style="list-style-type: none"> ○ Topic 309 for clearances associated with overhead and underpass structure design ○ Topic 804, Floodplain Encroachments ○ Topic 819, Estimating Design Discharge ○ Topic 812, Basin Characteristics ○ Topic 822 for debris control (used as supplemental information)

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	FB-Response-HWR-02: Site-Specific Drainage Impacts
	<ul style="list-style-type: none"> ○ Topic 830 for designing drainage systems related to at-grade crossings and roadways ○ Topic 860 for design of open channels (used as supplemental information) ○ Topic 871 for applicable protective devices on bridges (used as supplemental information) • Federal Highway Administration (FHWA) Hydraulic Design Series: <ul style="list-style-type: none"> ○ HDS-01, Hydraulics of Bridge Waterways ○ HEC-09, Debris Control Structures Evaluation and Countermeasures ○ HEC-21, Design of Bridge Deck Drainage ○ HEC-22, Urban Drainage Design Manual (used as supplemental information) ○ HEC-24, Highway Stormwater Pump Station Design • Caltrain Design Criteria, Chapter 8.0, for underdrain pipes • BNSF Railway - Union Pacific Railroad Guidelines for Railroad Grade Separation Projects, Sections 4.5, 5.7 and 6.8.6 for jurisdictions within BNSF - Union Pacific <p>Detailed grading and drainage plans will be prepared by the design-build contractor based on the guidance in the laws, regulations, and design standards listed above. In addition, the right-of-way acquisition process will include parcel-specific negotiations. Engineers participating in the acquisition process will ensure that site-specific drainage impacts to neighboring properties are not created.</p>

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	FB-Response-HWR-03: Floodplain Impacts - Inadequate Detail
Several commenters criticized the lack of detailed hydrologic and hydraulic, floodplain, and technical studies.	<p>Section 3.8.5 of the EIR/EIS provides a complete analysis of potential temporary and permanent impacts on floodplains. In addition, various regulations, administered through permits, are intended to protect existing flood capacity when a project crosses or modifies a natural or man-made flood-bearing channel or a flood-control project. Examples of permits that may be required to encroach on a floodplain include Section 408 Permits issued by the USACE, Encroachment Permits issued by Central Valley Flood Protection Board, and local development permits issued by the jurisdictional municipality or county that participates in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP). Each of these regulatory permits sets performance standards intended to ensure that impacts on existing flood capacity and conveyance are minimal, as demonstrated through site-specific hydraulic analyses. These permitting agencies and programs are described in Section 3.8.2 of the EIR/EIS. Because there are clear, enforceable standards, impacts to flood capacity and conveyance are not expected to be a significant differentiator among HST alternatives.</p>

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	<p>FB-Response-HWR-03: Floodplain Impacts - Inadequate Detail</p> <p>Section 3.8.6 of the EIR/EIS describes project design features that provide for flood protection and are used to reduce and minimize potential impacts on floodplains. HST design criteria are further described in the Hydraulics and Hydrology Design Guidelines Technical Memorandum (TM 2.6.5) available on the project website (Authority and FRA 2011). For example, American Railway Engineering and Maintenance of Way Association's (AREMA's) design criteria are followed for design of culverts and open channels along the HST corridor and Caltrans Highway Design Manual criteria are followed for design of culverts along roadways and highways impacted by the HST improvements. Local criteria are followed as required by the governing agencies. Hydraulic modeling (e.g., HEC-RAS) has been used as part of the design process to set the track elevation above the 100-year event and to allow for required freeboard. Hydraulic modeling will also be used at later stages of design to verify that other design criteria are met.</p> <p>Final HST design and construction will occur consistent with the following laws and regulations, and will follow the following design standards:</p> <ul style="list-style-type: none"> • Use of Harbor or River Improvements (33 U.S.C. Section 408) • Local Flood Protection Works (Title 33 CFR Section 208.10) • Central Valley Flood Protection Board (CCR Title 23, Div. 1) • Executive Order 11988 - Floodplain Management (U.S. Department of Transportation Order 5650.2) • HST Fresno to Bakersfield Section Hydrology, Hydraulics, and Drainage Report • HST Hydraulics and Hydrology Design Guidelines Technical Memorandum (TM 2.6.5) • American Railway Engineering and Maintenance of Way Association (AREMA) Manual for Railway Engineering: <ul style="list-style-type: none"> • Chapter 1, Part 1 for open channels adjacent to the tracks • Chapter 1, Part 3 for scour and erosion protection measures • Section 4.8.3.2 for design of culverts with outlet control • Caltrans Highway Design Manual: <ul style="list-style-type: none"> • Topic 309 for clearances associated with overhead and underpass structure design • Topic 804 for floodplain encroachments • Topic 819 for estimating design discharge • Topic 812 for basin characteristics • Topic 822 for debris control (used as supplemental information) • Topic 830 for drainage systems related to at-grade crossings and roadways • Topic 860 for open channels (used as supplemental information)

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	FB-Response-HWR-03: Floodplain Impacts - Inadequate Detail
	<ul style="list-style-type: none"> • Topic 871 for applicable protective devices on bridges (used as supplemental information) Federal Highway Administration (FHWA) Hydraulic Design Series: • HDS-01, Hydraulics of Bridge Waterways • HEC-09, Debris Control Structures Evaluation and Countermeasures • HEC-21, Design of Bridge Deck Drainage • HEC-22, Urban Drainage Design Manual (used as supplemental information) • HEC-24, Highway Stormwater Pump Station Design • Caltrain Design Criteria, Chapter 8, for design of underdrains • BNSF Railway - Union Pacific Railroad Guidelines for Railroad Grade Separation Projects, Sections 4.5, 5.7 and 6.8.6 for jurisdictions within BNSF - Union Pacific

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	FB-Response-HWR-04: Regional Water Supply Impacts
<p>Several commenters noted the general water supply conditions affecting the Tulare Lake Basin (e.g. groundwater overdraft) and expressed concern that the HST Project would worsen these conditions.</p>	<p>The HST is not expected to use a significant amount of water in either its operation or construction. Table 3.8-16 in the EIR/EIS shows the groundwater extractions in the Tulare Lake Hydrologic Region. Total groundwater extractions exceed 4 million acre-feet per year with municipal use well over 200,000 acre-feet per year. The Water Usage Analysis Technical Memorandum (TM) (see Appendix 3.6-B in EIR/EIS) describes the methods used to estimate water use for HST facilities such as the HMF and stations. The TM includes use factors, estimated number of employees, and data sources. From the analysis the HST is expected to use less than 200 acre-feet per year, primarily at the HMF and stations. This amount of water represents a very small percentage of regional water use.</p> <p>The Tulare Lake Basin is essentially a closed basin. In normal years, precipitation that falls in the basin either evapotranspires, percolates to groundwater or is used as surface water (e.g., collected in a reservoir or basin) (CVRWQCB 2004; Tulare Lake Basin Plan). The HST would not modify any of these hydrologic processes. Water may be conveyed in drainage ditches or temporarily stored in infiltration basins but ultimately the water that falls on land where HST facilities are located would continue to infiltrate as it currently does. On Table 5 of the Water Usage Analysis Technical Memorandum the existing water use at the track, station, and HMF locations is estimated as 12,000 acre-feet per year, approximately 60 times more water than the estimated future demand from the HST. The reason is that agricultural land uses consume more water than station or maintenance facility activities. Therefore, it is not expected that the HST would have any direct, significant adverse effect on water supplies or groundwater overdraft.</p>

Comment Summary	Response
HYDROLOGY AND WATER RESOURCES	FB-Response-HWR-05: Water Pollution Control
<p>Several comments address issues regarding water quality, primarily due to discharge of pollutants during construction.</p>	<p>The EIR/EIS acknowledges that project construction could result in water pollution impacts. These impacts are discussed in Section 3.8.5 of the EIR/EIS and methods for avoiding and/or minimizing these impacts are discussed in Section 3.8.6, Project Design Features. As part of Section 3.8.6, the subsection "Construction Stormwater Pollution Prevention Plan" (SWPPP) discusses how an existing regulatory program mandates the use of good housekeeping practices along with erosion and sediment control measures to minimize water pollution impacts. Anticipated BMPs are listed in this subsection, though the construction contractor has discretion to select the final measures based on site conditions and the specific construction methods and materials to be used so long as the measures achieve the requirements of the NPDES Construction General Permit (Order No. 2009-009 DWQ, NPDES No. CAS000002, as modified by 2010-0014-DWQ and 2012-0006-DWQ).</p> <p>In addition, the "Stormwater Management and Treatment" discussion outlined in Section 3.8.6 of the EIR/EIS, includes additional measures that would help ensure protection of water quality after the completion of construction. These measures will include the appropriate structural features, such as grassy swales, for filtering sediment and infiltrating runoff prior to discharging into surface waters that are necessary to comply with the design standards that will be approved by the SWRCB in the CWA Section 401 Water Quality Certification and the CWA Section 402 statewide NPDES permit for HST operations.</p> <p>Final HST design and construction will occur in compliance with the following laws and regulations:</p> <ul style="list-style-type: none"> • Federal Clean Water Act • State Porter-Cologne Water Quality Control Act • NPDES Construction Stormwater General Permit <ul style="list-style-type: none"> ◦ Stormwater Pollution Prevention Plan (construction BMPs & construction monitoring and reporting program) • NPDES Industrial Stormwater General Permit • Statewide NPDES Permit for HST Operations • CWA Section 401 Water Quality Certification for HST Fresno to Bakersfield (post-construction BMP design standards) <p>HST project design features for hydrology include standard industry practices, including those in the following:</p> <ul style="list-style-type: none"> • Caltrans General Permit • Caltrans Storm Water Quality Handbook: <ul style="list-style-type: none"> ◦ Project Planning and Design Guide ◦ Stormwater Pollution Prevention Plan and Water Pollution Control Program Preparation Manual • AASHTO Highway Drainage Guidelines

Comment Summary	Response
HAZARDOUS MATERIALS AND WASTES	FB-Response-HMW-01: Less than Significant Impact to Schools
<p>Commenters expressed concern about the HST transporting hazardous substances in close proximity to schools and the potential for spills and contamination.</p>	<p>The Authority and FRA are coordinating with local school districts that have schools within 0.25-mile of the proposed HST alignments in compliance with California Public Resources Code Section 21151.4, which requires the lead agency to consult about potential impacts to schools if the project might reasonably be anticipated to emit hazardous air emissions, or handle an extremely hazardous substance or a mixture containing an extremely hazardous substance. The Authority and the FRA have reviewed the commenters' conclusions regarding the potential for the HST to impact existing or proposed schools. As discussed in Section 3.10 of the EIR/EIS, Hazardous Materials and Wastes, no extremely hazardous substance (as defined in California Public Resources Code Section 21151.4) or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code, would be handled within 0.25 mile of a school as a result of implementing the HST Project. Also see Appendix 3.12-C, Children's Health and Safety Risk Assessment, which describes the potential environmental health and safety risks to children in the project, and explains that there would be no significant impacts to schools related to hazardous materials.</p>

Comment Summary	Response
HAZARDOUS MATERIALS AND WASTES	FB-Response-HMW-02: Construction on or in Proximity to PEC sites
<p>Commenters expressed concern about hazards related to HST construction on or in proximity to PEC Sites including interference with ongoing remediation efforts.</p>	<p>As discussed in the EIR/EIS, Hazardous Materials and Wastes, Section 3.10.5, Environmental Consequences, under Impact HMW #3 - Construction on or in Proximity to PEC Sites, construction activities could interfere with ongoing remediation efforts. Construction at known PEC sites would involve careful coordination with regulatory agencies and current landowners before advancing, so as to not impede ongoing remediation efforts at these locations or reduce the effectiveness of solutions that have been implemented. The Authority may need to incorporate site specific design features so that an alignment could be constructed to allow ongoing remediation at such sites. For example, the Authority may need to relocate existing remediation systems such as groundwater extraction wells and conveyance systems, or implement potential changes to HST design details, such as the use of retaining walls that could potentially reduce or avoid disturbance of a site in the vicinity of ongoing remediation, or sites with existing remediation solutions such as soil caps. Any work required at such sites would be conducted in accordance with all applicable laws and regulations related to the removal or disposal of contaminated materials (e.g., California Code of Regulations Title 22) and all applicable federal and state OSHA safety regulations. These regulations govern the transport and disposal of hazardous wastes to minimize the release or spread of contaminants and protect worker health and safety by requiring proper training and personal protective equipment when working in contaminated areas. All work at such sites would be done with approval from, and in coordination with applicable agencies such as the Department of Toxic Substances Control (DTSC), the Regional Water Quality Control Board (RWQCB), and the Environmental Protection Agency (EPA).</p>

Comment Summary	Response
SAFETY AND SECURITY	FB-Response-S&S-01: Traffic Safety
<p>Commenters were concerned that crossing roadway overpasses will be dangerous during tule fog, particularly for school buses carrying children.</p> <p>Commenters were concerned that road closures will increase emergency response times throughout the project area, affecting safety.</p>	<p><i>Overcrossings, Fog</i></p> <p>The EIR/EIS provides information on the roadway overpasses, such as width and clearance for the HST Project. The width of roadway overpasses would accommodate farm equipment on the overpasses and would therefore accommodate school buses (which are narrower than farm equipment) traveling in opposite lanes. The clearance below the overpasses would range from 16.5 feet over roadways to 27 feet over railroad tracks. See Sections 2.2.4, Infrastructure Components, and 2.2.5, Grade Separations, in Chapter 2 of the EIR/EIS for more detail on roadway overcrossings.</p> <p>Driving conditions in fog on modified roadways and overpasses would be the same as existing conditions in fog on existing roads and bridges. In some locations, new roadway overcrossings would deviate from the existing roadway alignment so that the overcrossing could be constructed while maintaining traffic on the existing road. Offline overpasses would be designed in accordance with design standards, which account for driver expectations (for example, roadway curves would not be abrupt) and safety standards (for example, guard rails and crash barriers would be installed on bridges). Such design features would reduce the potential for safety concerns during fog conditions.</p> <p>In addition, the HST would operate on an access-controlled, grade-separated right-of-way. Because there is no potential for other vehicles, including buses, to be on the track, there is no increase in existing risk.</p> <p><i>Emergency Response Times/Routes</i></p> <p>HSR policy is to provide roadway overpasses approximately every 2 miles and the alternatives have therefore been designed to provide at least this level of access, resulting in no more than 1 mile of out-of-direction travel for vehicles to cross the HST tracks. In many locations in the Fresno to Bakersfield Section, roadway overpasses would be provided more frequently, approximately every mile or less, because of the existing roadway infrastructure. Consequently, out-of-direction travel would be limited to approximately 1 mile in nearly all locations in the project area. EIR/EIS Section 3.11.6 explains that the project design would include coordination with emergency responders to incorporate roadway modifications that maintain existing traffic patterns and fulfill response route needs, resulting in negligible effects on response times by service providers. Section 3.11.5, Safety and Security Environmental Consequences, of the EIR/EIS provides additional detail regarding emergency response time during HST operations.</p>

Comment Summary	Response
SAFETY AND SECURITY	FB-Response-S&S-02: Derailment and Intrusion Concerns
<p>Commenters expressed concern that the protection of the HST tracks and the UPRR and BNSF tracks from derailed trains is not</p>	<p>The HST System would operate on a fully grade-separated and access-controlled guideway with intrusion detection and monitoring systems where required. The HST infrastructure would be designed to prevent access by unauthorized vehicles, persons, animals, and objects. Section 3.11.5, Safety and Security Environmental Consequences, provides information about project design features that would prevent train accidents, including derailments and collisions with trains and other vehicles.</p>

Comment Summary	Response
SAFETY AND SECURITY	FB-Response-S&S-02: Derailment and Intrusion Concerns
<p>adequate. They also indicated that the required separation between the tracks is not great enough to keep trains that derail at high speeds from intruding into the other train system's trackway; and that in places where the required separation cannot be met, an intrusion wall must be provided.</p>	<p>To prevent conventional passenger or freight trains from entering the HST trackway in the event of derailment, there would be either (1) a minimum separation between the HST tracks and the adjacent UPRR or BNSF tracks or (2) a barrier, such as a physical barrier or an earthen berm, where the minimum separation cannot be achieved. A horizontal separation of approximately 102 feet between the centerlines of adjacent conventional and HST trackways has been determined to be a distance sufficient to require no additional protection. These conditions are illustrated in Figures 2-32 and 2-33 in Chapter 2. Derailed rail equipment tends to continue in the direction of travel during a derailment event. The debris tends to concentrate in the area nearest the track rather than traveling perpendicular (CHSRP Strategy for Preventing High-Speed Derailments, 2014). In the United States the average length of a freight car is approximately 60 feet, while the longest freight car commonly found is approximately 89 feet in length. Thus it is reasonable to assume that debris from a derailment will most likely be concentrated within 89 feet of track centerline.</p> <p>The separation requirements illustrated in Chapter 2 and described further in Technical Memorandum 2.1.7 - Rolling Stock and Vehicle Intrusion Protection for High-Speed Rail and Adjacent Transportation Systems (Authority 2008; Authority 2013), were developed specifically for the HST and do not directly adopt existing criteria for separation requirements. The guidance for intrusion protection generally follows the recommended practices described in the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual and the design standards developed specifically for the construction and operation of HSTs, based on international practices, as well as intrusion barrier design guidance in a study by the FRA (FRA 1994). This includes technical guidance from National French Railways for separation between HST system and roadway infrastructure and International Union of Railways Codes for Structures Built over Railway Lines. For intrusion from highways/roadways and protection of highway motorists, the design guidance follows FRA recommendations and was revised to be compliant with Caltrans Highway Design Manual, which was updated in 2011 to specifically address separation requirements for HST facilities adjacent to the state highway system.</p> <p>Specific locations of barriers between the HST and adjacent rail lines have been included in Section 3.11.5, Safety and Security Environmental Consequences in the EIR/EIS.</p> <p>The high-speed train project design includes several components that minimize the effects of seismic events and the potential safety risks from seismic events. These include a train control system with earthquake early warning detection systems; operational responses to notification of a seismic event including stopping or slowing of trains and inspection of infrastructure; infrastructure design that will prevent structural collapse in the event of a significant seismic event; and rolling stock and infrastructure design elements that keep trains upright and in line in the event of a derailment, , such as containment parapets and guard rails, on each side of the trackway. These types of project features would prevent HST trains from leaving the HST corridor in the rare event of derailment resulting from a seismic event and minimize safety risks (CHSRA, White Paper, CHSRP Strategy for Preventing High-Speed Derailments, 2014; Railway-Technology.com, How Japan's Rail Network Survived the Earthquake, 2011).</p>

Comment Summary	Response
SAFETY AND SECURITY	FB-Response-S&S-03: Information on Increased Demand on Emergency Providers
Commenters expressed concern that the Draft EIR/EIS and the RDEIR/SDEIS did not adequately analyze the impact of stations and HMFs on increased service demands on emergency response providers. They request that the analysis include a more detailed discussion of what level of increased service would be required.	<p>Section 3.11.5, Safety and Security Environmental Consequences, of the EIR/EIS states that stations and HMF sites could increase fire and ambulance emergency response demands. However, the Section also states that both facilities would have onsite security patrols, resulting in a minor increased demand for police response.</p> <p>The impact analysis has been revised to clarify the difference between direct and indirect impacts on emergency response demands in station areas and to clarify that additional property and sales tax revenue spurred by station area activity and redevelopment would help offset costs for emergency responders. Mitigation Measure S&S-MM#1 provides that the Authority will provide a fair share of the cost of additional emergency services necessitated by the stations, through an agreement with the pertinent city. The impact analysis concludes that the impact to emergency response around station areas and HMFs could be moderate under NEPA and significant under CEQA.</p>

Comment Summary	Response
SAFETY AND SECURITY	FB-Response-S&S-04: Mitigation Measure #1
Commenters expressed concern that the Draft EIR/EIS and the RDEIR/SDEIS improperly deferred mitigation to address increased service demands on emergency response providers. They request that the analysis include a more detailed discussion of what level of increased service would be required and determine what the fair share impact fee would be for these impacts.	<p>Mitigation Measure S&S-MM#1 states that the Authority will provide a fair share of the cost of service based on monitoring of local fire, rescue, and emergency service providers to incidents at the stations and HMF before and after construction, as follows: "S&S-MM#1: Monitor response of local fire, rescue, and emergency service providers to incidents at stations and the HMF and provide a fair share of cost of service."</p> <p>Upon approval of the Fresno to Bakersfield Section, the Authority would monitor service levels in the vicinity of the Fresno, Kings/Tulare Regional, and Bakersfield stations and, at the HMF site (at such time that the HMF site is selected), in order to determine baseline service demands. "Service levels" consist of the monthly volume of calls for fire and police protection, as well as city- or fire protection district-funded EMT/ambulance calls that occur within the station and HMF site service areas. Prior to operation of the stations for HST service, the Authority would enter into an agreement with the public service providers of fire, police, and emergency services to fund the Authority's fair share of services above the average baseline service demand level for the station and HMF service areas (as established during the monitoring period). The fair share would be based on projected passenger use for the first year of operations, with a growth factor for the first 5 years of operation. This cost-sharing agreement would include provisions for ongoing monitoring and future negotiated amendments as the stations are expanded or passenger use increases. Such amendments would be made on a regular basis for the first 5 years of station operation, as would be provided in the agreement. To make sure that services are made available, impact fees would not constitute the sole funding mechanism, although impact fees may be used to fund capital improvements or fixtures (i.e., police substation, additional fire vehicle, on-site defibrillators, etc.) necessary to service delivery.</p> <p>After the first 5 years of operation, the Authority would enter into a new or revised agreement with the public service providers of fire, police, and emergency services to fund the Authority's fair share of services. The fair share would take into account the volume of ridership, past record and trends in service demand at the stations and HMF site, new local revenues</p>

Comment Summary	Response
SAFETY AND SECURITY	FB-Response-S&S-04: Mitigation Measure #1
	derived from station area development, and any services that the Authority may be providing at the station.

Comment Summary	Response
SAFETY AND SECURITY	FB-Response-S&S-05: Security Concerns/Emergency Response
<p>Commenters expressed concern that the Authority should consider the possibility of terrorist attacks, and ensure that security measures are in place to minimize or prevent damage from such attacks.</p> <p>Commenters questioned how emergency response to HST accidents and emergencies would occur.</p>	<p>As detailed in Section 3.11.6, Safety and Security Project Design Features, in the EIR/EIS, project design would incorporate system security plans and design features to address the potential for criminal and terrorist acts. Threat and Vulnerability Analyses and System Security Plans will provide the necessary information and provisions to detect and deter criminal and terrorist acts at rail facilities and on system operations. As described in Section 3.11.5, Safety and Security Environmental Consequences, of the EIR/EIS, access control and security monitoring systems, such as sensors on perimeter fencing, closed-circuit television, and security lighting where appropriate, would deter such acts and facilitate early detection. HST stations will incorporate security practices, on-site security staff and technology based on threat and vulnerability assessments. Permanent passenger screening is not planned, but station design will allow screening to be implemented based on heightened threat conditions."</p> <p>The project design incorporates a Fire and Life Safety Program, which meets the requirements of 49 CFR part 239 (see Chapter 2) for addressing emergency response in case of an accident or emergency. Outreach and coordination with local and State emergency response agencies has already begun, and will continue as the project moves toward implementation. Fire and Life Safety requirements included in the design of CHSRP include egress strategies for passengers and employees, access strategies for emergency responders, and the risk-based installation of fire and life safety infrastructure such as ventilation and fire suppression systems, lighting, walkways, and communications.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-01: Acquisitions, Displacements, and Relocations
<p>Commenters expressed concern over the alternatives impacting their residence or business and what would occur when the property is acquired by the Authority. A few commenters were concerned with how property acquisition would occur related to the recent downturn in the housing market. Other commenters were concerned with the impacts on their residence located within a mobile home park.</p>	<p>The Authority has worked closely with government agencies, businesses, and individuals to refine the design of alternatives to avoid or further minimize impacts, including property acquisitions, to the maximum extent possible in light of the performance criteria for the high-speed train. This refinement process will continue throughout final design for the selected alternative.</p> <p>The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. sec. 4601 et seq.) (Uniform Act) and Implementing Regulations (49 C.F.R. Part 24). The Uniform Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For all acquisition of real property, the Uniform Act requirements include the following:</p> <ul style="list-style-type: none"> • Appraisal of the property before negotiation begins; • An invitation to the property owner to be present for the appraisal; • A written offer of just compensation and a summary of what is being acquired; • Payment for property before taking possession of it; • An offer to acquire uneconomic remnants; and • Reimbursement for expenses resulting from the transfer of title. <p>The Authority will negotiate on a case-by-case basis with property owners whose land would be impacted by the HST System. Land will be acquired by the Authority at fair market value, as determined by the process described above. The Authority also has the power of eminent domain, allowing it to condemn the property of unwilling sellers, with payment of just compensation (i.e., fair market value) to the property owner. Eminent domain would be viewed as a last resort used to acquire the land for the public purpose of developing the statewide HST System. Information on the eminent domain process is available on the Authority's website, please see, Your Property, Your High-Speed Rail Project (Authority 2013).</p> <p>Just compensation is an amount paid to a property owner for property acquired for public purposes that is not less than the fair market value of the property acquired, including damages or benefits to the remaining property. Compensation would include any measurable loss in value to the remaining property as a result of a partial acquisition.</p> <p>The Uniform Act also ensures relocation assistance is provided to displaced persons to reduce the emotional and financial impact of displacement. When residential property is acquired, the Uniform Act's relocation assistance requirements include:</p> <ul style="list-style-type: none"> • Relocation advisory assistance for displaced tenants and owner-occupants; • A minimum 90-day written notice to vacate before requiring possession; • Reimbursement of moving expenses; and

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-01: Acquisitions, Displacements, and Relocations
	<ul style="list-style-type: none"> • Payment for the added cost of renting or purchasing comparable replacement housing. <p>When displacement results from the acquisition of non-residential properties, such as businesses and farms, the Uniform Act's provisions for relocation assistance include:</p> <ul style="list-style-type: none"> • Relocation advisory services; • A minimum 90-day written notice to vacate before taking possession; • Reimbursement for moving and reestablishment expenses. <p>The California Relocation Assistance Act (CRAA) essentially mirrors the Uniform Act and also ensures consistent and fair treatment of owners, expedited acquisition of property by agreement to avoid litigation, and promotion of confidence in the public land acquisitions process. However, if there is federal funding on the project, as here, the Uniform Act takes precedence.</p> <p>A property owner may also claim a loss of business goodwill under California Code of Civil Procedure 1263.510 et seq. Goodwill is defined as the benefits that accrue to a business because of its location; reputation for dependability, skill or quality; and any other circumstances resulting in probable retention of old or acquisition of new patronage. Loss of Goodwill is paid as an acquisition expense, but some of the items considered in calculating loss of goodwill may also be covered as a relocation expense.</p> <p>In addition, owners who believe they have suffered a loss of property value as a result of the project may file a claim with the State of California's Government Claims Board. More information about that claims process may be obtained online at: www.vcgcb.ca.gov/claims. In general, anyone who wishes to file a lawsuit against the State or its employees for damages must first pursue an administrative remedy through the Government Claims Program (GCP) by filing a claim.</p> <p>Consistent with the requirements of the Uniform Act and CRAA, the Authority is committed to working closely and proactively with residents and businesses to help them plan ahead for relocation, find new homes or sites, and solve problems related to the acquisitions. While relocation assistance would mitigate the displacement, relocation could still represent an inconvenience or hardship to some property owners.</p> <p>The Authority's relocation assistance and advisory services would include, but not be limited to, measures, facilities, or services that may be necessary or appropriate to determine the relocation needs and preferences of each household, business, farm, and nonprofit organization to be displaced. The Authority would provide current information on the availability, purchase prices, and rental costs of comparable replacement dwellings. Other benefits and compensation may include payment of residential moving expenses and replacement housing payments, nonresidential moving expenses, and reestablishment expenses. The Authority's relocation assistance documents in Appendix 3.12-A outline compensation and</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-01: Acquisitions, Displacements, and Relocations
	<p>acquisition procedures in detail. For any properties acquired for the project, including any community facilities identified in Final EIR/EIS Section 3.12.8, Environmental Consequences: Socioeconomics and Communities, the Authority would comply with appropriate provisions of the federal Uniform Relocation Act. Property owners whose entire or partial property would be acquired by the Authority would receive just compensation for their land and improvements. Under the Uniform Act requirements, eligible mobile home owners will be provided relocation benefits and just compensation if the mobile home is purchased by the Authority. If the mobile home is not purchased and would be moved, the Authority would provide compensation for moving and relocation expenses for the mobile home. Mobile home occupants (regardless of whether or not they are the owner) may be eligible for payment to move their personal property and a replacement housing payment.</p> <p>The Authority will consider the effects of severance on each individual property during the valuation, acquisition, and compensation process. The Authority is committed to working with agricultural property owners to address property acquisitions that result in the division of farmlands and related restriction of access at the individual farm level. Typically, these remnant agricultural lands would be located between road rights-of-way or adjoining parcels and the HST alignment. Parcel-specific analysis of severed parcels will take place during the appraisal process that will occur before property acquisition. If the property adjoining the severed property is considered part of the "larger parcel" (i.e., same use, same owner and contiguous) then impacts to the remaining parcel would be considered in the appraisal valuation. There may also be other considerations to be determined on a case-by-case basis, please refer to FB-Response-AG-03.</p> <p>The EIR/EIS estimates that small remnant parcels rendered uneconomic for farming operations would result from HST right-of-way acquisition in some areas. The determination of any loss in value of the remainder property would include lost revenue and would take into consideration factors such as added cost of operation and/or reduced productivity of the remaining land. The Authority will minimize the amount of noneconomic remnant parcels that remain in State ownership through its Farmland Consolidation Program, which it established in May 2012. The goal of the program is to provide for continued agricultural use on the maximum feasible amount of remnant parcels that otherwise may not be economical to farm (see Section 3.14.6, Project Design Features).</p> <p>In cases where access to individual farms is restricted, the Authority will evaluate with property owners the effectiveness of providing access across the right-of-way by creation of overcrossings or undercrossings at reasonable intervals (see Section 3.12.11, Mitigation Measure SO-MM#4). This would include the design of grade-separated crossings to allow stock and farm equipment continued access to bisected land holdings. However, if the cost of such a crossing would exceed the value of the affected remainder lands, the Authority would acquire the affected lands or otherwise compensate the farm owner for the loss in value rather than provide a crossing.</p> <p>Farm owners would be compensated consistent with the Uniform Act to provide full functionality for the remaining agricultural operation. Specific opportunities to restore functionality during and after construction will be analyzed on case-by-case basis in the valuation process. The appraisal will include temporary and permanent losses of property value.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-01: Acquisitions, Displacements, and Relocations
	<p>The Authority would compensate farm owners for the value of crops that are lost as a result of the project's disruption to farm infrastructure. In scenarios where construction would temporarily displace or interrupt access to farm infrastructure, the Authority would compensate property owners for loss of infrastructure and the owner would be able to replace infrastructure functionality before project construction begins. In cases where construction would commence before infrastructure can be restored, the farm owner would be compensated for the loss of agricultural production resulting from the disruption.</p> <p>Additional information about acquisition, compensation, and relocation assistance, and the Uniform Act, is also available in Appendix 3.12-A of the EIR/EIS, and on the Authority's website (Authority 2013).</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-02: Property Values – HST Project Lower Property Values Due to a Nearby Station or HST Alignment that Generates Noise/Visual Impact
<p>Commenters were concerned with the potential for loss of property value due to being located in close proximity to the HST alignment. Comments were received from both residential and business property owners.</p>	<p>Studies indicate that residential and commercial property values near transit stations typically increase and are valued higher than similar properties not in the vicinity of transit stations due to improved accessibility (both of residents to regional jobs and of employers to a larger labor pool). This effect is likely to occur in both downtown Fresno and Bakersfield. Section 3.12.8 discusses both the potential positive and negative economic impacts, including property value impacts, of the proposed project.</p> <p>A summary of the findings from a comprehensive literature review on the impacts of rail transit on residential real estate values is presented in Table 5-40 of the Community Impact Assessment Technical Report (Authority and FRA 2012c). The majority of the studies found that rail transit access had a positive influence on residential property values, with the premium for proximity to transit ranging from 2% to 45%. However, properties near a rail line but not close to a station could be exposed to the nuisance impacts associated with rail (noise, vibration, visibility, potential for accidents) without enjoying the benefits of improved accessibility. In a study of the property value impacts associated with the disamenities of proximity to linear features like roadways and railroads, Simons (2006) concluded that there were small negative property value impacts (2 or 3%) for residential properties within 750 feet of an active railroad track. Furthermore, it found that this negative impact could increase depending on the amount of whistle blowing and the number of train trips. Alternatively, another study that examined the residential property value impacts of various rail lines in the United States found a wide variety of results in different regions and concluded that home price changes were influenced more by regional housing market conditions than by proximity to railroad tracks (Baldwin and Frank 2008). Similar to the residential property findings, the studies summarized in Table 5-41 of the Community Impact Assessment Technical Report identified a positive influence on commercial property values in the vicinity of transit stations, with premiums ranging from 1% to as much as 167% (Authority and FRA 2012c).</p> <p>Several studies have evaluated the broader impacts of high-speed rail projects on growth and development trends of regional economies; however, no studies were found that examined the specific question of high-speed rail impacts on real estate property values. Successful HST station area development (and related real estate price effects) in countries with HST systems were shown to be linked to a number of factors, including robust local economic conditions, strong travel demand, and links to other forms of transit (Givoni 2006). It is difficult to extrapolate from studies conducted in the high-density urbanized areas of Japan, Korea, and Europe to predict property value effects in American communities that are more dispersed. Still, the studies show that the potential exists for the values of residential and commercial properties near HST stations to increase as a result of new access to the transportation system and the associated development that can occur around station locations.</p> <p>Owners who believe they have suffered a loss of property value as a result of the project may file a claim with the State of California's Government Claims Program. More information may be obtained online at www.vcgcb.ca.gov/claims/.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Responses-SO-03: Business Impacts – Construction/Operation Would Create Too Many Impacts on Businesses
<p>Commenters were concerned with the potential for negative impacts on businesses during construction and operation and the potential for loss of jobs. Some commenters noted the potential for business impacts in areas not in close proximity to a station.</p>	<p>Project construction requires the acquisition and relocation of a number of businesses. Relocation assistance would be provided to businesses as appropriate and it is anticipated that many of the jobs at these businesses would follow the relocation. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. sec. 4601 et seq.) (Uniform Act) The Uniform Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Act, see Appendix 3.12-A of the EIR/EIS and FB-Response-SO-01. Information about acquisition, compensation, and relocation assistance is also available on the Authority's website, please see, <i>Your Property, Your High-Speed Rail Project</i> (Authority 2013).</p> <p>It is anticipated that many of the jobs at these businesses would be relocated and not lost. Final EIR/EIS Section 3.12.8 provides information on the property acquisition impacts on businesses. The construction-related impacts to property, and mitigation for those impacts, are a factor considered within the environmental review process. Each of the resource chapters in the EIR/EIS (Sections 3.2, Transportation; 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; etc.) includes a description of the affected environment, the project's construction impacts on that environment, and feasible means of reducing or avoiding those impacts. There may be situations where impacts cannot be fully avoided and in these situations, measures would be implemented as appropriate and necessary to minimize or mitigate these impacts. For example, where noise impacts on sensitive receptors would occur during project construction, temporary sound barriers would be installed, nighttime construction activity would be limited, and/or other measures would be implemented. During construction, business impacts could include noise, vibration, dust, loss of parking, and traffic congestion in the areas of construction activities. Depending on the location of the construction activities and nature of the activities, the impacts on businesses would vary. Business-related impacts are more likely to occur near surface construction activities where local roadway modifications may temporarily disrupt circulation patterns. Businesses that tend to rely on drive-by traffic to attract customers would experience the greatest impacts; however, it is also possible that some of these businesses will experience beneficial impacts from construction and operation of the HST. Section 3.12.8 details how the project-related purchases made locally at the construction sites will result in increased sales tax revenues for cities and counties in the project area. Unless exempted, all transactions for tangible assets related to the project would be subject to sales tax. This includes materials such as gasoline, oil, parts and light bulbs that will be purchased locally. Additionally, new or existing businesses in the project area that supply goods and services to construction workers (e.g. retail stores, gas stations, banks, restaurants, and service companies) could benefit from increased patronage.</p> <p>As described in Section 3.12.10, the Authority will develop a relocation mitigation plan, in consultation with affected cities and counties, which will minimize the impacts on businesses during construction by providing signage, maintaining access to affected businesses through roadway modifications or detours, and by providing an ombudsman to act as a single point of contact to address individual questions about the relocation process. In addition, other sections of the EIR/EIS identify mitigation measures related to construction period traffic (Section 3.2.7), dust (Section 3.3.7), and noise (Section 3.4.7).</p> <p>Operation of the HST may also result in positive business impacts in those areas near stations where growth and transit-</p>

Comment Summary	Response
	<p>oriented development are encouraged, including downtown Fresno and Bakersfield. Sections 3.12.8 and 3.13.5 provide additional information on the potential benefits for businesses near stations. For areas without a station, no negative effects on local businesses are anticipated because the HST will be grade-separated and access to each business will be preserved. Mitigation measures for noise and visual impacts are identified in Sections 3.4.7 and 3.16.7.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-04: Neighborhood Impacts – HST Project Results in Impacts on Neighborhoods
<p>Commenters were concerned about the impacts on neighborhoods in close proximity to the HST alignment. Concerns included increased noise, bisecting the neighborhood, physical deterioration, and mitigation to address any impacts. There were some commenters who were concerned about the neighborhood impacts including noise, parking, and safety because of the HST stations.</p>	<p>The BNSF, Corcoran Bypass, Bakersfield South and Bakersfield Hybrid alternatives would result in significant impacts on community interaction or community facilities, as identified in Final EIR/EIS Section 3.12.8. In most areas, the project travels along or is adjacent to existing transportation corridors and would not isolate established neighborhoods, but would exacerbate division associated with historic linear facilities (e.g., roadways or railway tracks) that divide existing communities.. In most areas where the project would diverge from existing rail corridors, it would cross rural agricultural land or open space, where for the most part no concentrations of homes, businesses, or community facilities are found. However, the project does pass through areas where rural residential developments or small, unincorporated communities are present. Also, because of the predominance of agricultural activities in the region, there is a dispersed agricultural community consisting of individual or clustered farmsteads on actively farmed land. In most affected communities, some residences would have visual impacts resulting from vegetation removal or the presence of the HST structures, and/or changes in the roadway system; especially where the alternatives are at-grade. However, these impacts would mostly affect residences adjacent to the project elements and would not affect the overall neighborhood quality or social interaction. While the project would cause the displacement of specific homes, businesses, and/or community facilities, the Authority is working together with the local communities to implement mitigation measures such as SO-MM#1 and SO-MM#2, to ensure that these displacements or the resulting social and economic consequences of the project alternatives do not lead to any physical deterioration within the communities. Refer to Section 3.12.8 for complete information on the potential for physical deterioration. The Authority will minimize impacts associated with the division of communities by conducting community workshops to fully understand special relocation needs and obtain input from neighborhood residents to identify project design and use options that could strengthen community cohesion (see Section 3.12.11 SO-MM#1 and SO-MM#2). The project also requires the acquisition of community facilities, and the Authority will consult with these respective parties to reconfigure land use and buildings and/or relocate facilities prior to building demolition to ensure that the communities served continue to have access to these services, as specified in SO-MM#3 in Section 3.12.11. After mitigation, impacts on these neighborhoods are expected to be minimal.</p> <p>Around the urban HST stations, the uses are predominantly commercial and industrial; however, there are residential uses in close proximity which could be affected by station activities. On-street parking management in neighborhoods or business districts adjacent to stations would be the responsibility of the city with jurisdiction where the station lies. Parking demand is expected to grow over time. At the same time, development around the stations, such as TODs, as well as future expansion of local transit links at multi-modal stations, may reduce actual demand. Section 2.5 explains how the Authority would have a flexible approach to providing the necessary access to stations, including potential parking facilities. Refer to Sections 3.2, Transportation; 3.3, Air Quality and Global Climate Change; 3.4, Noise and Vibration; and 3.11, Safety and Security for additional information on potential impacts in the station area and mitigation measures to reduce or avoid the impacts.</p> <p>The construction-related impacts to property, and mitigation for those impacts, is a factor considered within the environmental review process. Not all construction impacts can be fully avoided. In these situations, measures will be implemented as appropriate and necessary to minimize or mitigate these impacts. For example, where noise impacts on sensitive receptors would occur during project construction, temporary sound barriers will be installed, nighttime construction activity will be limited, and/or other measures will be implemented. During construction, neighborhoods could experience</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-04: Neighborhood Impacts – HST Project Results in Impacts on Neighborhoods
	impacts related to noise, dust, and traffic congestion. Depending on the location of construction activities, impacts on the neighborhoods would vary, as would the amount of time. Each of the resource chapters in the EIR/EIS (refer to Sections 3.2 Transportation; 3.3 Air Quality and Global Climate Change; 3.4 Noise and Vibration; etc.) includes a description of the affected environment, the project's construction impacts on that environment, and feasible means of reducing or avoiding those impacts. Measures will be implemented to address these impacts are identified in Section 3.12.11. Refer to Section 2.8 in Chapter 2, Alternatives, for information on project construction activities.

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-05: Loss of Property and Sales Tax Revenues
<p>Commenters were concerned over effect the loss of property and sales tax revenues would have on local governments.</p> <p>Commenters were concerned about the potential impacts on school districts particularly the loss of students due to property acquisitions and the impact this would have on school district funding.</p> <p>Several commenters were concerned that road closures would require substantially longer bus routes, requiring funding to purchase additional school buses and pay additional drivers.</p>	<p>As detailed in Final EIR/EIS Section 3.12.8 and Section 5.4.4.2 of the Community Impact Assessment Technical Report, a short-term reduction in property tax revenues may occur as a result of property acquisition that removes parcels from county tax rolls. However, the percentage of total county tax revenues that would be lost as a result of project displacements is small and the overall economic impact would not be perceptible to community residents.</p> <p>Property tax revenues are likely to decrease whether or not the residential property or business owner relocates within the same jurisdiction. This is because the project would result in a net decrease in the number of properties on the pertinent County's tax roll. The property tax is collected by the County Tax Assessor and distributed to the county, its cities, schools, and other special districts. Accordingly, any revenue reductions would affect cities, counties, and other special districts that rely on property taxes (the limited effect on schools is described below in the School District - Funding and Access discussion).</p> <p>Property taxes are "general taxes" that accrue to the general fund of the pertinent city, county, or special district. As such, they can be used for any expenditure of the jurisdiction. There is no simple replacement for property taxes. For example, impact fees are limited to capital improvements, can only be collected once (as opposed to yearly property tax assessments), and cannot be used to fund operations and maintenance. Special assessments can be imposed only upon approval of the voters and are limited to financing only the special benefit received by each property being assessed. Special taxes are limited to financing some specific expenditure and are not available for general revenue purposes.</p> <p>Property owners displaced by governmental acquisition or eminent domain proceedings are granted property tax relief, allowing them to retain the assessed valuation of the property from which they were displaced (see Revenue and Taxation Code 68). Residential property taxes are limited by Proposition 13 (1978) to 1% of the property's assessed value at the time of purchase (subject to minor annual increases). For property owners buying a new property with their proceeds from acquisition or eminent domain, the adjusted base year value of the property that they acquire would be the lower of the fair</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-05: Loss of Property and Sales Tax Revenues
	<p>market value of the property acquired or the value that is the sum of the following:</p> <p>(a) The adjusted base year value of the property from which the person was displaced.</p> <p>(b) The amount, if any, by which the full cash value of the property acquired exceeds 120% of the amount received by the person for the property from which the person was displaced.</p> <p>Thus, only in limited circumstances would the displaced property owners be subject to a larger property tax obligation than on their original property.</p> <p>Along the BNSF Alternative, displacement of residences, businesses, and agricultural lands would result in estimated annual losses of approximately \$2.3 million in property tax revenue to the county and city budgets in the region. This estimated amount represents approximately 0.4% of the total fiscal year 2009-2010 combined property tax revenue of the counties and cities in the study area. The highest annual dollar-value losses would occur in Kern County (\$1.4 million), followed by Fresno, Kings, and Tulare counties at \$450,000; \$435,992; and \$37,000 in losses, respectively. Property tax losses would be balanced over the long run by the increased property tax revenues associated with the intensification of land uses (and increases in property values) resulting from the project.</p> <p>The potential for short-term reductions in sales tax revenues is discussed in Section 3.12.8. This would occur as a result of property acquisition that requires the relocation of businesses. In most cases, the reduction in sales tax revenues would be temporary. The relocation assistance to be provided by the Authority, including assistance in finding replacement properties, moving expenses, and obtaining permits, will ensure that affected businesses would continue to generate sales taxes in their new locations. In some instances, the sales tax revenue loss would be permanent. Permanent losses would occur where a business decides not to re-establish itself, or where it re-establishes outside the original city or county. Sales tax revenues are assigned to the city or county in which the sales tax is generated. As a result, if a business relocates outside the jurisdiction in which it is currently located, the sales tax revenue would then go to the city or county to which the business has re-located. That city or county would see an increase in sales tax revenues from this change. Additionally, the expected gain in sales tax revenue from project spending is greater than the expected loss from business relocation. Construction- and operation-related sales tax gains are discussed in Section 3.12.8 and Section 5.4.6 of the Community Impact Assessment Technical Report. The impacted cities and counties will have considerable additional revenues as a result of local spending on materials and services related to construction and operation of the HST.</p> <p>In the cities of Fresno and Bakersfield, station area development is expected to increase economic vitality in the downtown areas. There, the sales and property tax revenue losses would be counterbalanced by long-term increases in property value related to new commercial, residential, and mixed-use development in the station areas, as well as long-term increases in sales tax revenues from new commercial growth in the station areas. These increases would be dependent upon the type and rate of development in the areas around the stations.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-05: Loss of Property and Sales Tax Revenues
	<p><i>School District - Funding and Access</i></p> <p>Another important fiscal issue for communities is the potential effect the project will have on school district funding. High concentrations of residential displacements as a result of project construction have the potential to relocate large numbers of school-age residents. Section 3.12.8 provides information on the residential displacements under each of the alternatives. California public schools receive funding based on student attendance, so the relocation of substantial numbers of students would lead to an impact on overall school district funding. Section 3.12.8 also provides information indicating that, based on an examination of available properties, there is suitable vacant residential property within the current vicinity of all residential relocations. Therefore, no long-term effect on school district attendance and related per-pupil funding is expected to occur. The details of this analysis and complete results by school district can be found in Appendix 3.12-B, Effects on School District Funding and Transportation Routes.</p> <p>Private property that is acquired by the Authority for the project would be removed from the local property tax rolls. This would result in a net reduction of local property tax revenues available to school districts. However, this does not mean that the school districts' per-pupil revenue would decrease. As described in the Public Policy Institute of California's Funding California Schools: The Revenue Limit System:</p> <p>"Under [state] revenue limits each district has a base revenue limit, a dollar amount per pupil. A district's revenue limit entitlement is its base revenue limit multiplied by the number of students attending its schools. The number of students is measured by the district's average daily attendance (ADA). The revenue limit entitlement is funded by local property taxes and state aid. A percentage of the property tax revenue generated by real property located within a district is assigned to the district; state aid makes up the difference between a district's entitlement and its property tax revenue." (Public Policy Institute of California 2010).</p> <p><i>Vehicle/School Bus Routes</i></p> <p>As discussed in Section 3.2, roadway overpasses would be provided approximately every 2 miles, resulting in no more than 1 mile of out-of-direction travel for vehicles, including school buses, to cross the HST tracks. In many locations in the Fresno to Bakersfield Section, roadway overpasses would be provided more frequently, approximately every mile or less, because of the existing roadway infrastructure. While school bus routes are not specifically analyzed in the EIR/EIS, the frequency of roadway overpasses would minimize rerouting and limit out-of-direction travel to approximately one-half mile in nearly all locations in the project area. Also see FB-Response-TR-01 and Appendix 2-A of the EIR/EIS for a list of the roadway modifications.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-06: Impacts on East Bakersfield
<p>Commenters were concerned that the Draft EIR/EIS did not address the potential impacts to businesses and residents of East Bakersfield, east of the proposed Bakersfield stations. Commenters were also concerned that selection of the site of the Bakersfield station would also select the route through East Bakersfield without full disclosure of the potential impacts of the chosen route.</p>	<p>The effects on businesses and residents in East Bakersfield were discussed in the Draft EIR/EIS released for public review in August 2011. Following the publication of the Draft EIR/EIS, the environmental impact analysis study area was expanded to include East Bakersfield and the RDEIR/SDEIS was updated to discuss the project's effects on East Bakersfield in all of the individual impact sections (i.e., Sections 3.2 Transportation; 3.3 Air Quality and Global Climate Change; 3.4 Noise and Vibration, etc.). The study area for impacts on East Bakersfield extends from the alternative station locations in downtown Bakersfield to Oswell Street, where the three alternative alignments (i.e., BNSF, Bakersfield South, and Bakersfield Hybrid) converge. This ensures that, regardless of the station site that is selected, the potential impacts of the BNSF, Bakersfield South, and Bakersfield Hybrid alternatives east of the station are disclosed, and to the extent possible, avoided or mitigated.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-07: Environmental Justice/Outreach
<p>Commenters were concerned about the impacts to the environmental justice populations that were not addressed in the EIR/EIS and that there was no mitigation related to environmental justice. Commenters also noted that not enough outreach to environmental justice populations was conducted.</p>	<p>Executive Order (EO) 12898 requires federal agencies to address, to the greatest extent practicable and permitted by law, the potentially disproportionately high and adverse human health and environmental impact of their programs, policies, and activities on minority and low-income populations. As described in Section 3.12.9, which addresses EO 12898 and environmental justice, the HST Project is anticipated to result in disproportionately high and adverse impacts on minority and low income populations. As detailed in Table 3.12-17, the project will result in disproportionately high and adverse effects on minority and low-income populations as a result of operational noise and vibration, residential and community facility displacement, land use, parks and recreation, and aesthetics and visual resource impacts. Section 3.12.10 provides design measures to reduce impacts of the project on minority and low-income populations by requiring implementation of a construction management plan to address community impacts during construction by ensuring property access is maintained for local residences and businesses. The construction management plan will also implement traffic controls and consult with local transit providers to maintain route access for local transit and emergency service providers. Section 3.12.10 also describes that the Authority will implement a relocation mitigation plan, in consultation with affected cities and communities, to provide a high level of individualized assistance to all displaced persons. This will include helping affected property owners, tenants, or other residents apply for funding, loans, grants, and federal aid and research demographically similar areas for relocation.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-07: Environmental Justice/Outreach
	<p>Section 3.12.11 identifies mitigation measures: SO-MM#1, SO-MM#2, and SO-MM#3 implementing measures to reduce impacts associated with division of residential neighborhoods, existing communities, and the relocation of important community facilities, respectively; SO-MM#6 continuing outreach to environmental justice communities to obtain resident feedback on potential impacts and mitigation measures. The input provided from these communities will be used to refine the alternatives during ongoing design efforts. In addition, the Authority will develop special recruitment, training, and job set-aside programs so that minority and low-income populations can benefit from jobs created by the project. In addition to these measures, implementation of the mitigation measures proposed in other sections of the EIR/EIS would minimize the project impacts to minority and low-income populations.</p> <p>In order to understand the potential impacts and develop the appropriate mitigation, there has been an extensive public and agency outreach program to provide opportunities for public involvement throughout the EIR/EIS process. Environmental justice-related meetings were held with local officials; public, local and regional organization; government agencies; as well as with representatives from affected communities. The Authority's outreach efforts are ongoing, and outreach to minority and low-income populations will continue throughout the HST Project to ensure that these communities have the opportunity to comment on the project as described in SO-MM#6 in Section 3.12.12. Chapter 8, Public and Agency Involvement, includes detailed information on the numerous opportunities for participation available that have occurred starting with the scoping meetings held in 2009. Other opportunities include city council meetings, technical working groups (composed of senior staff from county and city departments, agricultural commissioners, redevelopment agencies, and economic development agencies), public information meetings, and opportunities to comment during the public hearings as part of the Draft EIR/EIS and Revised DEIR/Supplemental DEIS process. The purpose of these efforts was to gain the input of minority and low-income populations regarding the project and to obtain their comments as part of the public record, and so the analyses and conclusions in this EIR/EIS accurately reflect the setting and potential impacts of the project in those communities.</p> <p>To help the public, including minority and low-income populations, access and better understand the contents of the EIR/EIS, and solicit feedback, environmental justice-specific outreach efforts include providing meeting notices to environmental justice interest groups, listing advertisements in Spanish-language newspapers, posting meeting notices (in English and Spanish) at community facilities that serve low-income and minority populations, providing a telephone number to call for information in Spanish, Hmong, and Tagalog, and providing Spanish interpreters and informational materials at public hearings and meetings. Meeting materials provided contact information for those with special needs, allowing them to make necessary arrangements. Public meetings were typically from 3:00 PM to 7:00 PM or from 4:00 PM to 8:00 PM. People working more than one job and in-between work shifts were likely able to attend during these 4-hour meeting windows. The Authority has also contacted groups with interest in environmental and economic social justice issues, including the Mercado Latino Tianguis, Wasco Housing Authority, CA Rural Legal Assistance, Fresno Rescue Mission, California State University Fresno Economic and Community Development, and the Center for Race, Poverty, and Environment, among others. In addition, there have been a number of meetings with organizations (i.e., Central California Hispanic Chamber of Commerce, Kern Hispanic Chamber of Commerce, and the Kern County Black Chamber, Kern County Minority Contractors Association) and businesses in the project area to discuss the project and the alternatives, and ways to best reach the communities they serve.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-07: Environmental Justice/Outreach
	<p>In March 2012 the High-Speed Rail Authority Board adopted a Title VI Program, in May 2012 the Board adopted a Limited English Proficiency (LEP) Policy, and in August 2012 the Board adopted Environmental Justice (EJ) guidance. The adoption of these policies formalized the Authority's long-standing efforts to ensure that no person in the state of California is excluded from participation in, nor denied the benefits of, its programs, activities, and services on the basis of race, color, national origin, age, sex, or disability as afforded by Title VI of the Civil Rights Act of 1964 and related statutes. As discussed in FB-Response-GENERAL-27, while the formalized LEP and Environmental Justice Policies were not published until after the EIR/EIS process was already begun, the Authority and FRA fully analyzed the potential adverse effects to environmental justice communities as required by law. The Authority, as a federal grant recipient, is required by FRA as a condition of receiving financial assistance to conform to Title VI and EO 12898 and related laws. As permitted and authorized by Title VI, the Authority will administer a Title VI, LEP, and EJ Program in accordance with the spirit and intent of the non-discrimination laws and regulations. The Authority's sub-recipients and contractors are required to prevent discrimination and ensure non-discrimination in all of their programs, activities, and services.</p> <p>The LEP Policy articulates the Authority's policy to communicate effectively, with respect, and to provide meaningful access to limited English proficient (LEP) individuals to all the Authority's programs, services, and activities. Consistent with the Authority's LEP policy, the Authority has provided free language assistance services to LEP individuals encountered during public outreach or whenever requested by LEP individuals. As described above, language assistance has been provided through a variety of methods, including staff interpreters, translation and interpreter service contracts, and formal arrangements with local organizations providing interpretation or translation services or telephonic interpreter services.</p> <p>The EJ guidance articulates the Authority's position that fair treatment of people of all races, cultures, and income, is incorporated into all of the Authority's programs, policies and activities, and in particular during the development and evaluation of the environmental documents (under CEQA/NEPA). The EJ guidance seeks to both evaluate and mitigate disproportionately high and adverse impacts, particularly on minority and low-income populations that may occur as part of the Authority's activities and business.</p> <p>In accordance with EO 12898, offsetting benefits associated with the project were considered in the environmental justice analysis, as described in Section 3.12.9, that evaluated the potential for disproportionately high and adverse effects on minority and low-income populations. The HST project would provide benefits to populations throughout the region and the state, including minority and low-income populations. These benefits include improved mobility within the region, improved traffic conditions on freeways, improvements in regional air quality, and in long-term economic benefits to the region, including employment opportunities during project construction and operation. To ensure these employment opportunities benefit minority and low-income populations, the Authority has adopted a Community Benefits Policy to support employment of individuals who reside in disadvantaged areas and those designated as disadvantaged workers, including veterans returning from military service. It helps to remove potential barriers to small businesses, disadvantaged business enterprises, disabled veteran business enterprises, women-owned businesses, and microbusinesses that want to participate in building the HST</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-07: Environmental Justice/Outreach
	<p>System.</p> <p>Additionally, HST station construction and station area improvements in the downtown areas of Fresno and Bakersfield would benefit the local minority and low-income populations. The stations would provide interregional connectivity with other metropolitan centers and induce residential and commercial infill development. As described in Section 3.12.10, Project Design Features, the Authority's Urban Design Guidelines include a commitment by the Authority to work closely with communities where a station would be constructed to develop context-sensitive designs that enhance the public benefits of HST station development so that they meet the needs of the local communities, including more affordable housing and job opportunities. Through the process of providing Station Area Planning funding, the Authority will work collaboratively with local governments to plan intensified development around the stations while promoting social equity.</p> <p>More information about the Authority's Title VI Policies can be found at their website: http://www.hsr.ca.gov/Programs/title_VI_program.html. The Authority has assembled a Title VI Project Team with a Coordinator and Technical and Policy Consultants who can be contacted at: (916) 324-1541 or titlevicocoordinator@hsr.ca.gov.</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-08: Effects on Bakersfield High School
<p>Commenters were concerned that the BNSF Alternative would adversely affect the social integrity of Bakersfield High School.</p>	<p>As discussed in Final EIR/EIS Section 3.12.8, the BNSF Alternative would displace the Industrial Arts building on the Bakersfield High School campus. Depending on where and how it is replaced, this physical change could result in a social impact (as those alumni and community members who are emotionally attached to the high school's history and role in the community perceive a substantial void in the long-intact campus).</p> <p>The Bakersfield South Alternative would parallel the BNSF Railway line north of the existing rail yard that lies east of SR 99, avoiding the impacts on Bakersfield High School associated with the BNSF Alternative. The same would be true of the Bakersfield Hybrid Alternative, which by design similarly avoids crossing the campus.</p> <p>Mitigation Measure SO-MM#3: Implement measures to reduce impacts associated with the relocation of important facilities, provides that if the BNSF Alternative is selected through Bakersfield, the Authority will consult with the school district on a replacement for the Industrial Arts building in accordance with California Department of Education policies, and a replacement structure will be in place before the existing Industrial Arts building is removed.</p> <p>Harvey Auditorium (Property No. 48), the only building on the Bakersfield High School campus that is eligible for the NRHP, is</p>

Comment Summary	Response
SOCIOECONOMICS, COMMUNITIES, AND ENVIRONMENTAL JUSTICE	FB-Response-SO-08: Effects on Bakersfield High School
	<p>right across the street from the BNSF Alternative Alignment and within approximately 125 feet of the elevated track structure. The auditorium is about 200 feet east of the traction station, which would be located on the north side of the elevated tracks. The traction station construction, therefore, would not cause an adverse effect on the auditorium. The construction of the BNSF Alternative Alignment would have an indirect adverse effect because it would alter the setting of the auditorium through the demolition of buildings just north, northeast, and northwest of the auditorium, which would diminish the integrity of its setting, association, and feeling. The construction of the BNSF Alternative Alignment would also have an indirect adverse effect through the introduction of a large-scale (50 to 70 feet tall), elevated rail line across the street from the auditorium. This construction diminishes the historic design, setting, association, and feeling of this building, and would diminish its historic integrity.</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-01: Regional Growth/Land Use – Urban Sprawl
<p>Commenters were concerned about the potential for sprawl that would be induced with the HST Project and recommended that the DEIR/EIS include a second analysis of sprawl based on different assumptions for growth and land use patterns.</p>	<p>As described in EIR/EIS Section 3.12.8, Socioeconomics, Communities, and Environmental Justice, the existing railways were the primary reason for growth in this region of California. Although at that time growth was focused around the railway stations, most of the railroad stations in the study area are no longer used for passenger service and the areas adjacent to the railways in the urban areas are now associated with industrial and commercial development.</p> <p>As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, the Fresno and Bakersfield HST stations could potentially increase land use densities and TOD in Downtown Fresno and Bakersfield. The City of Fresno is in the process of updating plans that will specifically address higher development density (including medium- and high-density mixed-use consisting of multifamily residential, commercial, and office development) in the HST station area, which will result in beneficial effects for the city. Fresno has begun to define land use opportunities for TOD planning by using land use overlay zones and by identifying supporting services for transit passengers (i.e., restaurants and retail). The Bakersfield Station would be located in an area subject to revitalization efforts. Similar to Fresno, the adoption of goals and policies in Bakersfield related to the HST station would provide additional incentives for infill development to encourage the higher densities that would help to protect agricultural lands in the area. In general, the HST station would be consistent with the plans and policies for Downtown Fresno and Bakersfield redevelopment and would not create sprawl.</p> <p>Because the Kings/Tulare Regional Station would be located outside of a city center, growth is not desirable. As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, the Kings/Tulare Regional–East and Kings/Tulare Regional Station–West alternatives could stimulate transportation-oriented commercial development in areas presently used for agriculture. Zoning for some of the land adjacent to these two station sites is compatible with commercial development. However, for this to occur, the City of Hanford would have to annex this unincorporated land and expand existing sewer and water infrastructure, particularly for the Kings/Tulare Regional Station–East Alternative. This development is not currently planned by Hanford, but is within the City’s Sphere of Influence for future growth. Lands within the City’s Sphere of Influence clearly coincide with areas planned for urban growth and new development within these spheres would require annexation to the nearest municipal service providing entity to prevent urban sprawl and duplication of public services. Conversion of this land would substantially change the intensity and pattern of land uses, and have a growth-inducing impact on adjacent land uses, although growth is anticipated in existing land use policies.</p> <p>As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, the Kings/Tulare Regional Station–East Alternative would convert about 22 acres of land currently used for agriculture into a transportation use in unincorporated Kings County. Although this land is designated as Light Industrial in the Kings County General Plan and Zoning Ordinance, this change would convert agricultural land, and result in development pressure on adjacent lands designated for agriculture. The Authority would work with the City of Hanford and Kings County to discourage growth in the vicinity of the station by restricting onsite parking, encouraging transit to the station from downtown Hanford, Visalia, and Tulare, and purchasing agricultural conservation easements from willing sellers of adjacent agricultural lands. However, it is likely that the location of the station at this site would attract at least transportation-oriented commercial development. As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, the Kings/Tulare Regional Station–West Alternative would convert about 44 acres of agricultural, residential, and industrial land uses to a transportation use. Like the</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-01: Regional Growth/Land Use – Urban Sprawl
	<p>Kings/Tulare Regional Station-East Alternative, the Authority would work with the City of Hanford and Kings County to discourage growth in the vicinity of the Kings/Tulare Regional Station-West, but it is likely that at least transportation-oriented commercial development would take place in the vicinity of the station. Although the City of Hanford is directing growth on its western edge, future commercial development is envisioned closer to SR 198 than the Kings/Tulare Regional Station-West Alternative, and plans and policies for land use in the vicinity of the station site continue to be largely focused on agricultural uses. Therefore, the presence of either the Kings/Tulare Regional Station-East or West Alternative is likely to result in some unplanned changes in the use of existing adjacent land.</p> <p>The EIR/EIS provides a reasonable growth scenario based on the research and projections of a firm (Cambridge Systematics, Inc.) that specializes in such work. These growth scenarios were prepared by defining transportation investments, estimating transportation benefits, and estimating direct economic impacts that would be generated from the transportation benefits of each of the HST alternatives. Total regional economic impacts and land use consumption were estimated from the economic impacts.</p> <p>While neither the Authority nor local government entities can directly control future growth within the region or guarantee the absolute accuracy of growth projections, the HST project will indirectly change the real estate market by providing an economic driver for revitalization and new investment in areas near the urban stations.</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-02: Land Use – Conversion/Consistency
<p>Commenters expressed concern that the area to be converted was larger than indicated. Commenters were also concerned about land use adjacent to the HST alignment and the potential for changes in the use.</p>	<p>The HST Project would convert only the amount of land required for a transportation related use for the alignment and other components of the HST System. The land use conversion would not extend beyond the construction footprint, which is generally no more than 120 feet in width where at-grade and 60 feet in width where elevated. Additional land would be required at overcrossings, access roads to HST facilities, and for the HMF. The footprint includes all permanent and temporary uses of land that would be required for construction and operation of the HST and represents a conservative estimate. The land use impacts related to conversion to a transportation related use do not extend beyond these boundaries. Therefore, the acreage of actual land converted to a transportation use was estimated under what was considered a worst case scenario and would be less than was analyzed in the EIR/EIS.</p> <p>Regarding impacts to agricultural lands, there would be remnant agricultural parcels within the footprint that are not needed once construction is complete. For agricultural areas where right-of-way acquisition will result in remnant parcels, the Authority has established and is in the process of implementing a farmland consolidation program to sell remnant parcels to neighboring landowners for consolidation with adjacent farmland properties. On request, the program will assist the owners of remnant parcels in selling those remnants to adjacent landowners. A Settlement Agreement signed by the Authority specifies</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-02: Land Use – Conversion/Consistency
	<p>the methodology for estimating impacts to agricultural lands and specific mitigation measures. Refer to Section 3.14.6 of the EIR/EIS for additional information regarding the farmland consolidation program and impacts to agricultural lands.</p> <p>Local jurisdictions, and not the Authority, regulate local land use. Section 3.13.2.4 and Appendix 3.13-A provide information on the local jurisdictions' land use plans and the HST project's consistency with their goals and policies at the time of the analysis.</p> <p>As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, the Kings/Tulare Regional Station-East Alternative would convert about 22 acres of land currently used for agriculture into a transportation use in unincorporated Kings County. Although the Authority would work with the City of Hanford and Kings County to discourage growth in the vicinity of the station by restricting onsite parking, encouraging transit to the station from downtown Hanford, Visalia, and Tulare, and purchasing agricultural conservation easements from willing sellers of adjacent agricultural lands, it is likely that the location of the station at this site would attract at least transportation-oriented commercial development. This would be incompatible with current surrounding land uses. While current zoning allows for industrial uses of some of the land adjoining the Kings/Tulare Regional Station-East Alternative, most of the area continues to be zoned for agriculture and is in agricultural use. In addition, current plans and policies of the City of Hanford call for development to the west of the city and not to the east. This is partially due to the lack of sewer conveyance facilities on the eastern edge of Hanford and the expense of extending this infrastructure out to the potential station site. The Kings/Tulare Regional Station-East Alternative would change the pattern and intensity of the use of the land and would be incompatible with adjacent land uses. The presence of the station is likely to result in some unplanned changes in the use of existing adjacent land.</p> <p>The Kings/Tulare Regional Station-West Alternative would convert about 44 acres of agricultural, residential, and industrial land uses to a transportation use. Like the Kings/Tulare Regional Station-East Alternative, the Authority would work with the City of Hanford and Kings County to discourage growth in the vicinity of the Kings/Tulare Regional Station-West, but it is likely that at least transportation-oriented commercial development would take place in the vicinity of the station. This would be incompatible with current land uses. Although the City of Hanford is directing growth on its western edge, future commercial development is envisioned closer to SR 198 than the Kings/Tulare Regional Station-West Alternative, and plans and policies for land use in the vicinity of the station site continue to be largely focused on agricultural uses. The Kings/Tulare Regional Station-West would change the pattern and intensity of the use of the land and would be incompatible with adjacent land uses. Therefore, the presence of the Kings/Tulare Regional Station-West Alternative is likely to result in some unplanned changes in the use of existing adjacent land.</p> <p>The City of Fresno is currently updating its land use plan to specifically address development in the proposed station area. As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, in early 2010, the City of Fresno initiated preparation of new plans for the Downtown Fresno neighborhoods. A specific plan for the Fulton corridor and for the downtown neighborhoods community plan will include information related to a HST station in Fresno and information related to attracting and expanding businesses as a result of the project. Therefore, the HST station and related land use changes that may occur would be consistent with planning policies for Downtown Fresno. In addition, the City has adopted the City of</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-02: Land Use – Conversion/Consistency
	<p>Fresno Design Guidelines, California High-Speed Train Project (City of Fresno 2012) to provide guidance to the Authority for design of the HST facilities in Fresno, including guideways, grade separations, and the station.</p> <p>The Bakersfield station would be located adjacent to the Downtown Redevelopment Plan area, which encompasses approximately 225 acres. The City of Bakersfield has adopted redevelopment plans for the HST station area in Bakersfield. The goals of the Downtown Bakersfield Pioneer Redevelopment Plan are to eliminate and prevent the spread of blight and deterioration in Downtown Bakersfield through the demolition or removal of certain buildings, and the rehabilitation and improvement of structures by present owners, potential successors, and the Redevelopment Agency (City of Bakersfield 1972). Similar to Fresno, the adoption of goals and policies in Bakersfield related to the HST station would provide additional incentives for infill development in Downtown Bakersfield. Therefore, the HST station and related land use changes that may occur would be consistent with planning policies for Downtown Bakersfield.</p> <p>Refer to Section 3.13, Station Planning, Land Use, and Development, and Appendix 3.13-A, Land Use Plans, Goals, and Policies, for complete information on TOD and for information on the policies and local regulations that are currently in place in the station areas.</p> <p>During construction, the Authority would lease some land from willing landowners for construction staging areas, laydown areas, and other construction-related activities. This land would be restored as close as possible to its pre-construction condition and returned to the original landowner once it is no longer needed for construction. Because lands used for temporary construction would be acquired from willing landowners and restored to their previous condition at the end of the construction period, long-term land uses would not change, adjacent land uses would not change, and there would not be a substantial change in the long-term pattern or intensity of land use incompatible with adjacent land uses.</p> <p>As stated above, land purchased by the Authority that is not used for HST facilities would be sold following project construction. At the discretion of the local cities and counties, land uses allowed on those remnant parcels would remain consistent with local zoning governing land uses on the parcels.</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-03: Significance of Land Use Impacts
<p>Commenters expressed concern that the analysis is not specific enough regarding impacts to existing and planned land uses along the route.</p>	<p>This project EIR/EIS contains significantly more detail about the proposed HST project than was available at the first-tier Program EIR/EIS, and the level of analytical detail is adequate for environmental analysis. The designs presented in the EIR/EIS are based on preliminary engineering. In larger transportation infrastructure projects, consistent with both CEQA and NEPA, the environmental analysis process occurs prior to completion of final design, but is at a sufficient level of detail to allow for full disclosure of environmental impacts of the project. Therefore, the EIR/EIS is based on the level of engineering and planning necessary to identify potential environmental impacts and to identify the appropriate mitigation measures.</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-03: Significance of Land Use Impacts
	<p>For the HST Project, direct land use impacts would occur when the project permanently converts the existing land uses to a transportation related use and precludes future planned uses (as identified in the local general plan, specific plan, or zoning classification). This impact would reduce the area available within the jurisdictions for those uses. The analysts used quantitative analysis and GIS tools to determine direct impacts related to the conversion of land uses to a transportation-related use as a result of the required property acquisitions for the project. The HST alternative alignments generally require about 60 feet where elevated and 120 feet where at-grade; this is the area that would be permanently converted to a transportation related use. The station areas would require additional areas because of the station footprint and associated facilities. As described in Section 3.13.5, Station Planning, Land Use, and Development, the conversion to a transportation related use represents less than 0.01% of the total area in the four counties. Land uses for the counties and cities were generalized into the dominant land use categories (e.g., residential, commercial, and industrial) so that the land use could be presented consistently among the areas to the extent possible (see Table 3.13-1). The impact analysis looked at the zoning (future use) that would be converted in the various jurisdictions. In addition to the permanent conversion of land use, indirect impacts on land use could occur, negatively affecting the nearby existing and future land uses as a result of increases in noise, loss of access, and/or visual impacts. The analysts reviewed local plans and zoning to determine indirect impacts. Those impacts were analyzed and disclosed in the respective EIR/EIS sections on Transportation, Noise and Vibration, and Aesthetics and Visual Resources. Growth inducing impacts were analyzed and disclosed in Section 3.18, Regional Growth.</p> <p>For land use impacts under NEPA, impacts were defined as changes in land use. These changes range from those that are measurable but not perceptible, and are consistent with applicable plans and policies to those that would result in changes in the existing land use patterns of adjacent lands and are not consistent with applicable plans. Similarly, under CEQA, a significant impact on land use and development occurs if the following occurs:</p> <ul style="list-style-type: none"> • Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. • Cause a substantial change in pattern or intensity of land use incompatible with adjacent land uses. <p>Because the HST Project is a state and federal project, consistency with local plans and policies is not required by law, and thus they are not applicable to the HST project. Nonetheless, in order to comply with the principles set out in Proposition 1A, the HST Project has been designed to minimize conflicts and to be compatible with future and planned use to the extent possible. Accordingly, the analysis includes a review of the goals and policies of the local land use plans, as well as other plans. However, because as a State and federal project, HST is not subject to local jurisdictions' local and regional plans, potential conflicts are not treated as environmental impacts.</p> <p>As described in Section 3.12.8, Socioeconomics, Communities, and Environmental Justice, the existing railways were the primary reason for growth in this region of California. Growth was focused around the railway stations. However, most of the railroad stations in the study area are no longer used for passenger service and the areas adjacent to the railways in the urban areas are now associated with industrial and commercial development. Existing and planned industrial and commercial</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-03: Significance of Land Use Impacts
	<p>uses are typically not as sensitive to changes in noise or visual quality; therefore, no significant impacts are expected to these uses. Where residences are directly taken, they will be acquired at the fair market value and relocation assistance will be provided to owners and residents pursuant to federal and state law. In the rural areas, the adjacent land uses are primarily agriculture uses, which would not be significantly affected by noise from the HST trains. Where noise impacts are identified for sensitive receptors, such as residential uses, noise mitigation is planned as part of the HST Project.</p> <p>With some exceptions, the HST Project would not directly result in significant changes in the pattern or intensity of land use (although it will indirectly change the land use market near urban stations by providing an economic driver for revitalization of nearby areas). As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, the Kings/Tulare Regional Station sites would change the pattern and intensity of the use of the land and would be incompatible with adjacent land uses. The presence of a station at either site would be likely to result in some unplanned changes in the use of existing adjacent land. Land directly impacted by the HST Project will be acquired and just compensation provided. Refer to Section 3.12.2 and Appendix 3.12-A for information on the acquisition and compensation process. The HST Project also includes mitigation measures that will reduce impacts on existing uses and future uses related to access, noise, and visual impacts as well as impacts on agriculture lands. These measures are presented in the respective EIR/EIS sections, including Transportation, Noise and Vibration, Agriculture, and Aesthetics and Visual Resources. Understandably, new development influences the context for future development on adjacent properties. As such, the HST may add some limitations to adjacent land uses, such as changes in noise, but this would result in affecting site development, not changing the existing land use designation or future uses. Refer to Section 3.4.7, Noise and Vibration, under N&V-MM#3: Implement Proposed California High-Speed Train Project Noise and Vibration Mitigation Guidelines, for information on the policies regarding noise mitigation.</p> <p>Where the HST alignments are in rural areas, access would be maintained to the adjacent properties through overpasses and other grade-separated points. Where undeveloped land is zoned for industrial purposes, the HST could preclude the addition of an at-grade rail spur on the HST side of the rail line. However, other access points would not be affected and these areas can still be serviced by other transportation modes. Therefore, the adjacent future uses would not be indirectly affected by the HST and no significant impacts on land use would be anticipated. Additionally, in areas where the alignment is at-grade, the HST would not preclude the extension of utility services (i.e., water or sewer) which would need to pass perpendicular to and under the HST alignment; and in many locations the existing transportation access is maintained through provision of overpasses and it would not preclude future overpasses as necessary. Because services and access would not be precluded, no significant impacts would be anticipated.</p>

Comment Summary	Response
STATION PLANNING, LAND USE, AND DEVELOPMENT	FB-Response-LU-04: Effects on Future Land Use
<p>Commenters were concerned about the effects of the HST Project on future land use plans.</p>	<p>The CEQA evaluation for the effects on future land use and the change in land use is based upon the existing conditions only. The NEPA evaluation is based on a comparison of future land use with and without the project. Where the HST would add incrementally to an existing transportation corridor (such as adjacent to the BNSF railroad), the HST would not preclude future development. Except where land is being acquired and at the Kings/Tulare Regional Station sites, the HST Project would not result in substantial changes in the pattern or intensity of land use, nor, as mitigated, would it be incompatible with the adjacent land uses or preclude the ability to develop based on the future uses. Understandably, any new development influences the range of development on adjacent property. As such, the HST may add some limitations (i.e., noise, utility provision, accessibility, visual access) to adjacent land uses, but this would result in affecting how the site would be developed, but would not preclude the development from moving forward. As discussed in Section 3.13, Station Planning, Land Use, and Development, of the EIR/EIS, the Kings/Tulare Regional Station–East and Kings/Tulare Regional Station–West alternatives could stimulate transportation-oriented commercial development in areas presently used for agriculture. Zoning for some of the land adjacent to these two station sites is compatible with commercial development. However, for this to occur, the City of Hanford would have to annex this unincorporated land and expand existing sewer and water infrastructure, particularly for the Kings/Tulare Regional Station–East Alternative. This development is not currently planned by Hanford, but is within the City’s Sphere of Influence for future growth. Lands within the City’s Sphere of Influence clearly coincide with areas planned for urban growth and new development within these spheres would require annexation to the nearest municipal service providing entity to prevent urban sprawl and duplication of public services. Conversion of this land would substantially change the intensity and pattern of land uses, and have a growth-inducing impact on adjacent land uses, although growth is anticipated in existing land use policies.</p> <p>Planned development would have a new context in which to adapt their developments if constructing nearby the HST Project, but this would not preclude use of the land. Future development may need to include noise walls, just as they might consider plantings and walls to divide adjacent areas from agriculture uses to address equipment noise and dust. The HST mitigation measures for noise impacts only address existing buildings and not planned future developments; refer to Section 3.4.7 Noise and Vibration, under N&V-MM#3: Implement Proposed California High-Speed Train Project Noise and Vibration Mitigation Guidelines. The utilities necessary to serve the future land uses would not be precluded from crossing under or parallel and outside the HST right-of-way. Transportation access would also be maintained under the elevated HST profile or with overpasses where the alignments are at-grade. Likewise, the development of new overpasses to provide additional access is also not precluded. The HST may preclude installation of a freight rail spur in some locations; however, the HST has preserved the majority of vehicle access points and therefore such areas could still be accessed by other transportation means and the overall use could be maintained. Future station development would likely result in aesthetic improvements in the urban station areas. Outside of the station areas, the elevated guideway could provide some visual barriers to the adjacent land uses.</p>

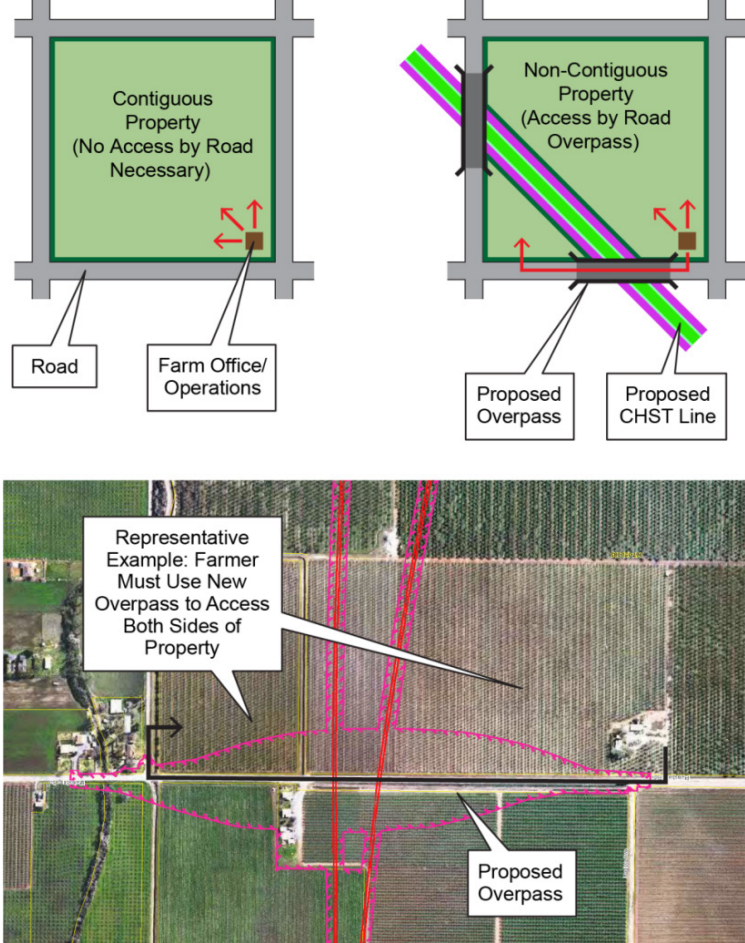
This page intentionally left blank

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-01: Farmland Impacts – General
<p>Numerous comments emphasized the importance of farmland and agricultural production for the local area, the region, and the nation as a whole, and expressed concern about the project's impacts on agricultural land and on agricultural employment.</p>	<p>Section 3.14 of the EIR/EIS describes the important role of agriculture in the local and regional economy, and the agricultural land resources that make the south San Joaquin Valley the lead agricultural production region in California and in the nation. Section 3.14.4 also describes the trends in agricultural land conversion in the Fresno to Bakersfield section. Recognizing the importance of agricultural land conversion, the EIR/EIS examines multiple factors that could permanently convert Important Farmland to a non-agricultural use, including: placement of the HST alignment and ancillary facilities; parcel splits that may render some lands no longer farmable; the potential for remainder parcels to fall out of Williamson Act and Farmland Security Zone contracts; effects on confined animal agricultural operations; effects on irrigation distribution canals; noise effects to grazing animals; wind-induced effects; and effects on aerial spraying. The EIR/EIS identifies the permanent conversion of Important Farmlands (prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance) to a non-agricultural use as a significant impact under both NEPA and CEQA. The total anticipated permanent conversion of Important Farmland to non-agricultural use is estimated to be about 3,470 acres for the preferred alternative. It is important to note that the Authority and FRA are including farmland of local importance in the definition of Important Farmlands - usually Important Farmlands include only prime farmland, farmland of statewide importance, and unique farmland. Including farmland of local importance adds about 5% (depending on the alternative) to the affected farmland acreage. Section 3.19 of the EIR/EIS identifies the permanent conversion of Important Farmland in the Fresno to Bakersfield section as contributing to cumulative farmland loss in the San Joaquin Valley and across the state.</p> <p>Section 3.14.6 describes project design features implemented to avoid and minimize impacts to Important Farmland. These features include restoration of land used for temporary construction sites, a farmland consolidation program to sell remnant parcels to neighboring landowners for consolidation with adjacent farmland properties, assistance to confined animal facility owners during the process of obtaining new or amended permits or other regulatory compliance necessary to the continued operation or relocation of the facility, and continued research on HST wind and noise.</p> <p>Mitigation Measure AG-MM#1 requires that the Authority (in partnership with the California Department of Conservation) acquire conservation easements to protect an equivalent amount of farmland from future conversion. Lands permanently impacted by the HST will be mitigated at minimum of a 1:1 ratio on land of a similar or higher quality, with an additional increment of mitigation provided by the Authority carrying the agricultural land mitigation commitments from the County of Madera, et al. v. California High-Speed Rail Authority settlement agreement into the Fresno to Bakersfield Section. The Authority will utilize the services of the Department of Conservation's Farmland Conservancy Program to identify suitable agricultural land for permanent preservation through the purchase of conservation easements from willing sellers. The Authority has reached an agreement with the Department of Conservation to purchase easements for agricultural land mitigation in the Merced to Fresno and Fresno to Bakersfield sections of the HST system. As identified in the scope of work for that contract, the Authority and the Department of Conservation will develop selection criteria for the easements that will include, but not be limited to, the requirements in Public Resources Code section 10252, including the prioritization of easements on lands adjacent to other protected agricultural lands or that provide greenbelts or urban separators that have the added benefit of limiting urban sprawl where appropriate.</p> <p>Conservation easements will preserve land for agricultural use in perpetuity that might otherwise be converted over time to other uses, and will therefore substantially lessen the severity of the impact of the HST project. Conservation easements will not create new farmland; however, and the Authority and FRA recognize that the Fresno to Bakersfield section of the HST</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-01: Farmland Impacts – General
	<p>Project will result in a net loss of agricultural land that cannot be avoided or mitigated to a less than significant level through any feasible means. The impact is therefore significant and unavoidable.</p> <p>The loss of approximately 3,470 acres of Important Farmland for the preferred alternative in Fresno, Kings, Tulare, and Kern counties (and an additional loss of up to 129 acres of grazing land) needs to be considered in the context of the existing amount of Important Farmland within these counties (approximately 2.2 million acres, 826,000 acres, 1.3 million acres, and 2.7 million acres, respectively; see EIR/EIS Table 3.14-2). All four counties are currently experiencing substantial farmland losses due to development. Between 2000 and 2008, the Department of Conservation estimates that approximately 33,178 and 19,910 acres of farmland in Fresno and Kings counties, respectively, were converted to non-agricultural uses. The HST Project may help to reduce farmland losses from urban development in the future (see FB-Response-GENERAL-03); the Authority, working with the Department of Conservation, will prioritize conservation easement locations to areas that would support establishment of greenbelts and urban separators. Mitigation Measure AG-MM#1 specifies this prioritization.</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-02: Severance – General Response including Roadway Impacts
<p>Many commenters discussed the disruptive effects of the new alignment of carefully developed (e.g., assembled over time) farm parcels. Examples included farmers needing to drive greater distances to access their fields on both sides of the alignment. For this reason, the general response is accompanied here by a response regarding the trip inconvenience. Commenters also asked for an explanation of the need to cut diagonally across parcels, rather than along existing property lines.</p>	<p>The HST right-of-way would sever parcels. The Authority and FRA have made great efforts to minimize severance through alignment selection and careful project design. Engineering constraints, primarily related to maintaining high-speed curves in this HST Project area, do require deviation from transportation corridors in several areas along the alignment. Parcel severance as one factor contributing to agricultural land conversion is discussed in Section 3.14. This analysis specifically considers the potential for severed parcels to be converted away from agricultural use.</p> <p>In addition to the EIR/EIS analysis in Section 3.14, the Authority will address the effects of individual parcel severance, and impacts on individual farm roadway access, during the right-of-way acquisition process. The Authority will acquire the land of property owners whose land is directly affected by the project in accordance with the Uniform Relocation Act (42 U.S.C. Ch. 61). The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Section 3.12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and FB-Response-SO-01. The project must also adhere to California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available on the Authority's website.</p> <p>The property lines of agricultural parcels in the Central Valley tend to reflect the township/range surveys of the 19th Century and are typically oriented along north-south and east-west axes. The Central Valley is aligned along an axis that trends from northwest to southeast. The Valley's urban corridor and the transportation infrastructure connecting its cities are similarly aligned along this northwest to southeast axis; diagonal to most property lines in agricultural areas. As a result, there is no practical alignment that would meet the objectives of the project and the demands of a high-speed rail alignment, while also running along north-south property lines. Accordingly, it is not possible to completely avoid parcel severance.</p> <p>The HST project could potentially create an economic hardship for the land owner of a severed parcel in those cases where it may no longer be economically viable to farm parcels on both sides of the HST. This will be evaluated during the right-of-way acquisition process, and if found to be the case, compensation to the landowner would be paid. See Exhibit AG-02.1 for examples of how severance could affect farm operations and farm efficiency by showing that the impacted farmer would have increased distances to travel, but would still have access to their farmlands on both sides of the HST. Efforts to minimize these impacts include frequent public road crossings in the project design. For example, most of the new public road overcrossings would generally occur approximately every 2 miles to provide continued mobility for local residents and farm operations. However, as discussed in FB-Response-TR-02, in most locations in the Fresno to Bakersfield section roadway overpasses would be provided more frequently, approximately every mile or less, because of the existing roadway infrastructure. Consequently, out-of-direction travel would be limited to approximately 1 mile in nearly all locations in the project area. Longer intervals between road crossings would generally occur in areas with no current crossings (i.e., no change from existing conditions). Additional access across the HST right-of-way may be preserved by creation of private overcrossings or undercrossings at reasonable intervals (see mitigation measure SO-MM#4). This may include the construction of grade-separated equipment crossings to allow farm equipment continued access to bisected land holdings. However, if the cost of such a crossing would exceed the value of the affected remainder lands, the Authority would offer to acquire the affected lands or otherwise compensate the farm owner for the loss in value rather than provide a crossing.</p>

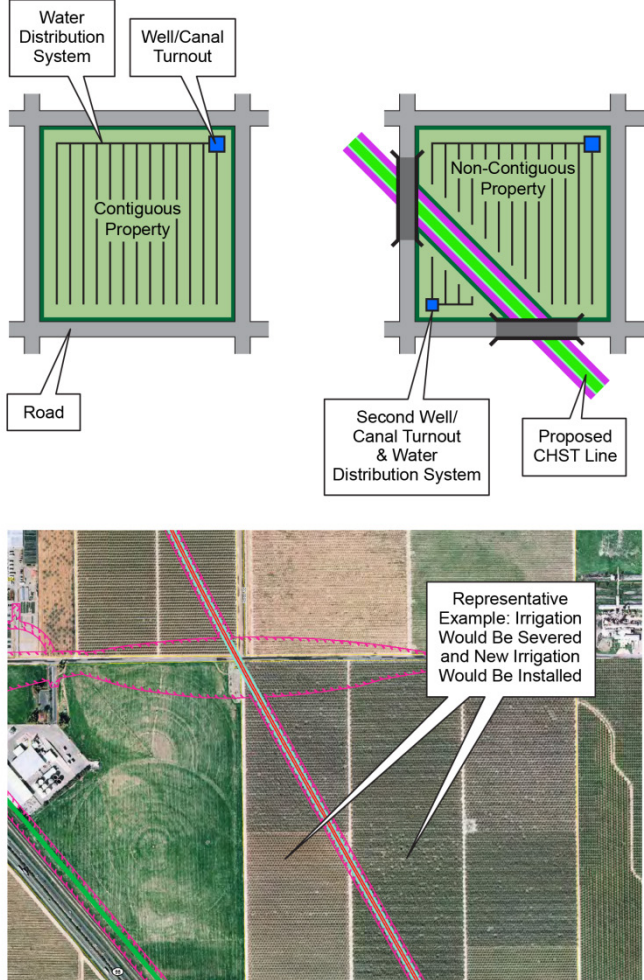
Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-02: Severance – General Response including Roadway Impacts
	<p>The Authority will work with agricultural property owners to address severed parcels that will result from the HST alignment dividing a larger parcel. Right of way acquisition for the HST project is subject to federal and state constitutional, statutory, and regulatory requirements. The Authority is committed to working with agricultural property owners to exercise the maximum flexibility allowed by these requirements to accommodate the desire of an agricultural landowner as to acquisition of remainder acreage when a larger parcel is acquired for the project. Consistent with the Authority's Farmland Consolidation Program, in those instances in which it acquires remnant acreage of Important Farmland, the Authority will also seek to transfer that property to adjoining landowners to ensure continued agricultural use to the maximum extent feasible.</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-02: Severance – General Response including Roadway Impacts
	 <p>The diagram illustrates the impact of road severance on agricultural lands. On the left, a 'Contiguous Property' is shown with a 'Road' and 'Farm Office/Operations' on one side, indicating that no access by road is necessary. On the right, a 'Non-Contiguous Property' is shown, where access is required by a 'Road Overpass'. This property is divided by a 'Proposed CHST Line' and a 'Proposed Overpass'. Below the diagram, an aerial photograph provides a 'Representative Example' where a farmer must use a 'Proposed Overpass' to access both sides of a property. The aerial photo shows a 'Proposed Overpass' crossing a 'Proposed CHST Line' and a 'Proposed Road'.</p> <p>Exhibit AG-02.1: Road Severance</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-03: Severance – Non-Economic Remnants
<p>Commenters mentioned that severance would lead to additional impacts that were not reported in the RDEIR/SDEIS. These comments asked for an explanation of the analysis.</p>	<p>The RDEIR/SDEIS discusses a subset of severed parcels called <i>unusable remainders</i> or <i>non-economic remainders</i> or <i>remnants</i>. These parcels were included in the project acquisition area, and their acreage counted as part of the direct impact area (the construction <i>footprint</i>). The rationale for including such remainders in the construction footprint is that there would be no apparent agricultural use of these severed parcels, and so they should be acquired by the Authority even though they would not be needed for any project use (HST alignments, road modifications, etc.). It is possible that these remainders may have some use during construction (e.g., staging areas, material storage). Either during right of way acquisition or after construction, the Authority will attempt to consolidate remnants with adjacent or nearby parcels through its Farmland Consolidation Program - see Section 3.14.6, Project Design Features. The Farmland Consolidation Program is a realistic, ongoing program implemented by the Authority's Right of Way staff to avoid and minimize conversion of Important Farmlands by parcel severance. The program is consistent with consolidation programs used for other linear transportation facilities (e.g., Caltrans projects). The agricultural land impacts analysis is conservative; however, because it does not presume consolidation of these parcels, but rather counts them in the assumed total acreage of converted Important Farmland.</p> <p>Non-economic remnant parcels were identified following completion of the preliminary design effort in support of the EIR/EIS, which confirmed the construction footprint including the HST alignments, road modifications, and other project features. Analysts (land use planners, real estate specialists, and GIS operators) conducted a review using the construction footprint and parcel boundaries to identify remainders that did not appear to have any potential for continued agriculture use either individually or in combination with adjacent land. The multiple considerations analyzed included:</p> <ol style="list-style-type: none"> (1) size of the remnant land and its ability to be economically farmed; (2) access to the remnant land; (3) location relative to a connection to other farmland; (4) shape of remnant land and whether that would make it hard to farm the parcel; (5) hardship in general and whether severance causes an overall hardship in maintaining economic activity on what might otherwise appear to be an economically viable parcel. <p>Examples of remainder parcels determined to no longer support continued agricultural use are as follows:</p> <ul style="list-style-type: none"> • Sliver remainders with adjacent roads or rail. • Corner remainders with adjacent roads or rail (see Exhibit AG-03.1). • Remnants created by road overcrossings with access issues. <p>Many severed parcels result in small or irregularly shaped remainders. Many of these parcels were not added to the acquisition area of the RDEIR/SDEIS because analysts determined that some use would likely be possible. For example, small parcels could be consolidated with adjacent landowners and larger, irregularly shaped parcels could still be farmed (although with some loss of efficiency). It is important to note that the intent of this analysis was to identify farmland that could be lost to production. Impacts associated with farm efficiency or property transactions (e.g., consolidation) are social and economic effects that do not mean that farmland would be lost.</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-03: Severance – Non-Economic Remnants
	<p>It is also important to note that the analysis of parcel severance (including unusable remainders) was conducted for the purpose of describing the nature and extent of the impact to satisfy CEQA and NEPA, focusing on the topics of farmland conversion and social/economic effects. It is not a sufficient basis for the real estate transactions that would occur during the right-of-way acquisition process.</p> <div> </div> <p>Exhibit AG-03.1: Minor Severance with Unusable Remnants</p> <p>Parcel-specific analysis will take place during the appraisal process that will occur before property acquisition, consistent with the Uniform Relocation Act. The Uniform Relocation Act establishes minimum standards for treatment and compensation of individuals whose real property is acquired for a federally funded project. For more information on the Uniform Relocation Act, see Section 3.12 of the EIR/EIS (Socioeconomics, Communities, and Environmental Justice) and FB-Response-SO-01. The project must also adhere to California Relocation Assistance Act requirements, which are discussed in Appendix 3.12-A of the EIR/EIS. Information about acquisition, compensation, and relocation assistance is also available on the Authority's website. Following the completion of acquisition and construction, the final tally of unusable remainders would likely be somewhat different than estimated for the EIR/EIS. However, because of the effort undertaken for EIR/EIS, the final tally would likely be substantially consistent with the initial estimates.</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-04: Severance – Farm Infrastructure
<p>Commenters discussed disruption of on-farm infrastructure, primarily concerned about water infrastructure (e.g., wells, irrigation systems). Comments about major water district conveyance systems are addressed in FB-Response-HWR-01.</p>	<p>Construction of the HST could result in disruption to existing infrastructure on agricultural lands. These features could include buildings and structures, pumps and wells, reservoirs/tail water ponds, irrigation systems (including distribution lines, canals, and gravity flow systems), power supplies, and access. See Exhibit AG-04.1 for examples of how severance could affect farm infrastructure. As discussed in FB-Response-SO-01 and FB-Response-AG-02, farm owners would be compensated consistent with federal and state severance damage and relocation assistance laws to provide similar utility as they had before the project for the remaining agricultural operation.</p> <p>Impacts to on-farm infrastructure, including required restorative work, will be analyzed on a case-by-case basis during the appraisal process with consultation from experts in the hydraulic engineering and agriculture management fields. Section 3.14.5 explains the potential for temporary utilities (e.g., irrigation and power systems) and farmland infrastructure interruption. Irrigation systems will be allowed to cross the HST right of way, but must meet specific design standards to ensure HST operation and serviceability. Individual negotiations as part of the right of way acquisition process are intended to resolve redesign, productivity, and reimbursement issues.</p> <p>The timing of any restorative work or reconfigurations will be addressed in the property acquisition stage and documented in the right-of-way contract. Provisions regarding the timing of irrigation pipes will be addressed at this time to correlate with periods of decreased water demand. The Authority is also working with local districts and municipalities to minimize service disruptions to water distribution systems, see Section 3.6.6. In most cases, compensation for loss of infrastructure (irrigation facilities, wells, etc.) would allow time for upgrades and relocations to occur before construction to minimize irrigation disruptions. However, in cases where construction results in a disruption, the farm owner will be compensated for any reduction in agricultural production. For more information on how the acquisition process works, see the <i>Your Property, Your High-Speed Rail Project</i> pamphlet on the California High Speed Rail Authority's website at: http://www.hsr.ca.gov.</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-04: Severance – Farm Infrastructure
	 <p>Exhibit AG-04.1: Irrigation Severance</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-05: Pesticide Spraying/Dust/Pollination
<p>Many commenters asked about the related topics of additional losses due to the vortex effect from passing trains. This was mostly in regard to pesticide spraying, but also included comments about bees (pollination interference) and dust. Pesticide spraying comments also addressed interference with crop dusting patterns.</p>	<p>The EIR/EIS evaluated whether the HST Project could cause indirect effects on adjacent farmland from project operations. Based on the analysis in the EIR/EIS, these effects would be less-than-significant with regard to conversion of Important Farmland to a non-agricultural use. Wind-induced effects (e.g., pesticide drift, dust, pollination impacts) and loss of access for aerial pesticide application are discussed in the EIR/EIS (see Section 3.14.5), and the analysis concludes that these effects would not result in additional conversion of Important Farmland to non-agricultural use. With regard to wind-induced effects (damaging blossoms, disrupting bee pollination activity, reducing crop production due to dust, and causing pesticide drift), studies discussed in Section 3.14 indicate that the potential for such impact would be avoided by distance because the high-speed trains would be moving on guideways located approximately 30 feet from the fenceline. Studies supporting the finding of mitigation by distance were cited in the EIR/EIS (see Appendix 3.3-A, Potential Impact from Induced Winds), stating that estimated winds produced from the HST 10 feet from the side of the train which is within the HST right of way would be comparable to the daily average wind speed measured at the Merced and Fresno airports. Although the analyses do not prove zero effect, they do support a conclusion that effects outside the right of way are negligible and would not result in additional farmland conversion (Agricultural Working Group White Paper, Induced Wind Impacts, 07/02/2012; Agricultural Working Group White Paper, Bees and Pollination, 07/02/2012). Also see FB-Response-AQ-01, which discusses dust impacts in more detail.</p> <p>There is some potential for limitations on pesticide spraying, both from wind-induced effects (discussed above and applicable to both aerial application and ground spraying of pesticides) and for pilot safety (e.g., new 100-foot tall radio communication towers). For the reasons discussed in Section 3.14.5.3 of the EIR/EIS, the Authority does not expect that these limitations would result in additional farmland conversion. Construction of the radio communication towers would follow federal, state, and local safety guidelines for radio masts, including lighting that improves visibility. Therefore, changes in aerial spraying patterns are not anticipated to occur. Wind induced by passing trains (i.e., the vortex effect described by commenters) could result in a cessation of pesticide application either directly (i.e., by order of the local Agricultural Commission) or by the choice of applicators concerned about pesticide drift. For the reasons described above, however, wind-induced effects of the high-speed train on pesticide spraying would be avoided by distance. As indicated by e-mail correspondence (December 22, 2010) with the California Department of Pesticide Regulation, no new regulations are anticipated, but enforcement authority resides with the local Agricultural Commissioners. Local requirements could change in response to the HST Project, but county Agricultural Commissioners in the area who participated in the Authority's Agricultural Technical Working Group in 2011, have not indicated that any new regulations or enforcement policies would be required or adopted in response to the HST Project (Agricultural Working Group White Paper, Pesticide Use Impacts, 07/02/2012). The Authority does not expect that, in the worst case, additional farmland would be converted. Rather, in the worst case (i.e., distance does not attenuate wind), it would be more difficult (e.g., expensive) for farmers to conduct normal pesticide spraying operations. Practices would need to change, and some economic losses could occur (e.g., more expensive pest control measures, reduced productivity), but farmland would not be converted.</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-06: Confined Animal Facilities
<p>Concerns about impact on confined animal facilities included the integrated nature of the operations, challenges with permits, and other potential indirect effects from noise and EMF.</p>	<p>The EIR/EIS for the Fresno to Bakersfield Section recognizes that the loss of confined animal facilities is a concern in this region that produces a substantial part of the nation's food and depends upon agriculture for its economic well-being. The Authority will compensate farmers for the loss of their confined animal facilities. It would be left to the individual farmer to decide how they would invest that compensation. Where the project would result in the closure of a facility, there is no certainty that the affected facility would re-open.</p> <p>Dairies are the most common type of confined animal facility in the project area. Fresno, Kings, Tulare, and Kern counties support a large number of dairies. According to the California Department of Food and Agriculture, in 2011, there were 98 dairies in Fresno County (with 1,199 cows/dairy), 140 dairies in Kings County (with 1,346 cows/dairy), 307 dairies in Tulare County (with 1,615 cows/dairy), and 55 dairies in Kern County (with 3,069 cows/dairy). The number of dairies operating in these counties varies from year to year. Between 2010 and 2011, Fresno County lost 8 dairies, Kings County lost 3 dairies, Tulare County lost 4 dairies, and Kern County added 1 dairy. The dairy industry has been consolidating in recent years. According to the California Department of Food and Agriculture, in 2005, Fresno County had 118 dairies, Kings County had 165 dairies, Tulare County had 334 dairies, and Kern County had 55 dairies. Although in all of these counties there has been a decline in the number of dairies since 2005, the total number of cows in dairies in each county actually increased over that period. The total production of Grade "A" milk has also increased during that period.</p> <p>The project may affect a limited number of dairies by displacing essential facilities and/or land necessary for wastewater disposal. Dairy permitting (i.e., obtaining a CUP pursuant to local zoning and a wastewater disposal permit from the Regional Water Quality Control Board) is time-consuming and uncertain. Despite compensation for losses, there are no guarantees that the affected dairy would be able to re-open. The potential loss of a few dairies, while unfortunate, is not substantial from the point of view of total dairy production in this portion of the San Joaquin Valley. The Authority has committed to maintain a "permit bureau" to help businesses (including confined animal operations) overcome the regulatory disruptions caused by the project (see Section 3.14.6 of the EIR/EIS).</p> <p>With regard to farm animal noise impacts, the FRA guidance manual <i>High-Speed Ground Transportation Noise and Vibration Impact Assessment</i> (see Chapter 3, Table 3-3) has established a threshold for high-speed train noise effects on livestock of 100 dBA Sound Exposure Level (SEL) (the total A-weighted sound experienced by a receiver during a noise event, normalized to a 1-second interval). An animal would need to be within 100 feet of an at-grade trackway to experience an SEL of 100 dBA. At locations adjoining an elevated guideway, an SEL of 100 dBA would not occur beyond the edge of the elevated structure. The EIR/EIS analysis concludes that remaining livestock holding areas (after acquisition of some existing holding areas) would not be located within 100 feet of either side of the track centerline (50 feet from the edge of the right-of-way), and, therefore, no HST noise effects on confined animals would occur (refer to Section 3.14.5.3 and Appendix 3.14-B, Impacts on Confined Animal Agriculture). Farm animal noise impacts are also addressed in FB-Response-N&V-01.</p> <p>Some comments indicated concern about the effects of stray currents on livestock (e.g., dairy cows). A study by Amstutz and Miller (1980) is the only available reference for the effects of stray currents and electromagnetic fields on livestock (Authority and FRA 2012f). That study of 11 livestock farms concluded that livestock health, behavior, and performance were not affected by electrical and magnetic fields created by a very large (765 kV) overhead transmission line. The HST System would operate on a much smaller 2x25 kV overhead contact system. Therefore, the Authority and FRA have determined that the effects of stray currents on livestock would have no adverse effect under NEPA and a less-than-significant impact under</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-06: Confined Animal Facilities
	CEQA.

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-07: Williamson Act and Farmland Protection Policy Act
<p>In relation to qualifying for the Williamson Act, some commenters inquired about how many severed remnants would no longer meet the minimum parcel size requirements to remain under contract.</p> <p>Commenters requested the FPPA scores for the project.</p>	<p><i>Williamson Act and Farmland Security Zone Contracts</i></p> <p>The EIR/EIS describes impacts to lands covered by the California Land Conservation Act of 1965 (Williamson Act, including Farmland Security Zones). Impact acreage and parcel counts are summarized in Section 3.14, Impact AG #6 and Table 3.14-10. Several commenters stated that additional impacts could occur because of severance; specifically, some parcel remainders would no longer meet minimum size requirements for a Williamson Act contract. The Authority and FRA acknowledge this potential impact in the EIR/EIS. As stated in Section 3.14.5:</p> <p>"A partial acquisition of land protected by Williamson Act or FSZ contract could constrain the potential continued use of that land for farming because (1) the remaining land acreage might be too small to meet the minimum requirements under these programs and (2) the resulting increase in property taxes on the land might affect the financial feasibility of continued farming."</p> <p>The section concludes that the potential removal of lands from Williamson Act or FSZ contracts is considered to have a substantial intensity under NEPA and the impact is significant under CEQA prior to mitigation. The impact would be reduced to a less-than-significant level with implementation of Mitigation Measure MM-AG#1.</p> <p>Although the EIR/EIS acknowledges these impact mechanisms, it concludes that there would be no discernible farmland conversion over and above the direct project impacts. There are many factors that influence a property owner's decision to convert property from agriculture to developed use, not the least of which is basic land use constraint(s) imposed by local zoning requirements. Loss of a Williamson Act contract may influence a land development decision, but any attempt to quantify the project's contribution to additional farmland conversion would be speculative due to the many factors involved. Additional analysis was performed in response to public comments received on the Draft EIR/EIS document. The RDEIR/SDEIS includes analysis in Section 3.14.5.3 on farmland severance to identify where severance would result in remainder parcels that would be too small to qualify as eligible for a Williamson Act or FSZ contract. The Williamson Act defines acceptable agricultural land as being at least 10 acres in size for prime agricultural land, and at least 40 acres in size for non-prime agricultural land (Government Code 51222). Each county may enforce different minimum acreage requirements for its Williamson Act land. The additional analysis was based on the minimum size requirements provided by each county for parcels to enter a Williamson Act or FSZ contract. The minimum acreage requirement for prime farmland is 18 acres in Fresno County, 10 acres in Kings County, 10 acres in Tulare County, and 20 acres in Kern County. The minimum acreage requirement for non-prime farmland in all four counties is 40 acres (Personal communication with John Adams, Fresno County 2011; Personal communication with Kathe Malouf, Kern County 2012; Personal communication with Michael Washam, Tulare</p>

Comment Summary	Response
AGRICULTURAL LANDS	FB-Response-AG-07: Williamson Act and Farmland Protection Policy Act
	<p>County 2012; Personal communication with Sandy Roper, Kings County 2012).</p> <p>Exceptions to the minimum parcel size can be granted for smaller parcels that are contiguous with other parcels that meet the minimum acreage requirements and are under the same Williamson Act contract. The acreage requirements for remnant parcels may be waived at the discretion of each county. For the purposes of determining the parcels potentially out-of-contract, any parcel that no longer met the minimum requirements of the county was identified as potential additional affected acreage and included in Table 3.14-11 of the EIR/EIS.</p> <p>There were multiple comments submitted specifically asking about compensation if their severed parcel is removed from a Williamson Act contract. The Authority will compensate farmers for the loss of their Williamson Act contracts. It would be left to the individual farmer to decide how they would invest that compensation.</p> <p><i>Federal Farmland Protection Policy Act</i></p> <p>Information about the Farmland Protection Policy Act is included in the Final EIR/EIS in Section 3.14 including scores from NRCS Form CPA-106 for each of the alternatives. Appendix 3.14-A contains land evaluation score sheets prepared by the NRCS State Resources Inventory Coordinator and site assessment scores prepared by project staff.</p>

This page intentionally left blank.

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	FB-Response-AVR-01: Blocked Views
<p>Most commenters expressed that the visual analysis did not adequately or accurately address the impacts of blocked scenic views. Some also questioned the impact of blocked views to property values and to businesses.</p>	<p>The Authority has adopted design standards and design guidelines that are established to create a minimum aesthetic quality for a long-lasting infrastructure. Many of these elements are described in Table 3.16-2 in Section 3.16.5.3, High-Speed Train Alternatives. In addition to the features described in Table 3.16-2, the Authority's Urban Design Guidelines for the California High Speed Train Project (Authority 2011d) briefly discusses the principles of context-sensitive solutions to guide the design of stations. This approach is equally applicable to elevated guideways and will be employed to mitigate visual impacts through context-sensitive design. Aesthetic Guidelines for Non-Station Structures (TM 200-06) (Authority 2011b) will also guide the design of the HST components. These standards and guidelines work to minimize and avoid aesthetic effects on the adjacent surroundings, where possible.</p> <p>The Authority recognizes that the view of the San Joaquin Valley's scenery could be impaired by portions of the proposed HST. However, the degree to which views of a visual resource (e.g., a scenic mountain range) are affected by a proposed project is highly dependent upon a number of factors. One factor is the duration of view. For example, when a viewer is stationary, such as in a residence, objects blocking a view can affect the experience of the view to a greater extent than when a viewer is traveling and seeing the view for a short duration of time. Other factors include the location, number, and sensitivity of viewers and any existing obstructions relative to the visual resource being viewed. These factors and the location of the HST relative to them were considered when determining the potential impacts of the HST to aesthetics and visual quality. In addition, views that would be impaired in areas that have high visual quality ratings would be considered to be more impacted than in situations where the visual quality ratings are low. This consideration was used when determining the degree to which the HST might degrade a view. Section 3.16.4, Affected Environment, of the EIR/EIS includes an analysis of the aesthetics and visual quality of the existing conditions, and in Section 3.16.5, Environmental Consequences, changes that would be incurred by the project. There are areas where the visual quality would be lowered and various mitigation measures would be considered to address the potential impacts of the HST.</p> <p>Opportunities are rare for reducing the area of a visual resource that would be blocked by HST structures in a view. This is because the HST requires guideways that are within narrow ranges of vertical and horizontal alignments, and opportunities for "fine-tuning" their design to reduce blocked views would be limited. Once the centerline and grade of the HST are established, it is very difficult to change them. Reducing the sizes of structures associated with guideways is also problematic. The size of the structures that support elevated guideways, as well as the sizes of the bases that support at-grade guideways, are dictated by the loads these facilities need to support; thus, they are not subject to much, if any, change in size. Other facilities such as HST stations, parking structures, HMFs, and traction power distribution stations can also block views. To reduce the severity of these impacts, these facilities would be designed to be aesthetically and architecturally compatible with their surrounding areas. During the design, areas where views may be blocked will be evaluated and mitigation measures implemented. For example, in areas where support structures might block or impinge on views, the structures will be designed with decorative or ornamental features such as reveals or designs in the concrete to reduce the negative impacts of view obstruction.</p> <p>Vegetative screening of the HST components can also help mitigate for views that are lost, and "soften" views of facilities. Mitigation measures for adverse impacts to aesthetics and visual resources are presented in the EIS/EIR in Section 3.16.7,</p>

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	FB-Response-AVR-01: Blocked Views
	Mitigation Measures, and in Table 3.16-2, Characteristics of Typical HST Components. Property owners who believe they have suffered a loss of property value as a result of the project may file a claim with the State of California's Government Claims Board. More information may be obtained online at www.vcgcb.ca.gov/claims/ .

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	FB-Response-AVR-02: Community Character
<p>Commenters did not understand how existing low visual quality would affect the analysis of the visual impact of HST. Others expressed that the introduction of the HST and associated overcrossings in the countryside must necessarily have significant and substantial impacts.</p>	<p>The Authority recognizes that the character of a community, whether urban or rural, is partially determined by its aesthetic and visual qualities. Community character is directly influenced by the presence and appearance of existing physical features. The analysis of aesthetic and visual quality impacts cannot consider every possible location or view; rather, key viewpoints were selected as representative of existing conditions and were evaluated with the addition of the HST to the view. The evaluation of aesthetics and visual resources provided in Section 3.16 of the EIR/EIS and the Aesthetics and Visual Resources Technical Report (Authority and FRA 2012a) does not specifically describe community character, but instead describes how consistent the HST Project would be with the landscape character of the various landscape units, and how the project would change (or not change) visual quality, as elaborated in the FHWA visual impact assessment method applied in this study (FHWA 1988). This approach to the aesthetics and visual resources follows the federal guidelines provided in the <i>Visual Impact Assessment for Highway Projects</i> (FHWA 1988) and California Department of Transportation (Caltrans) guidelines provided in the <i>Standard Environmental Reference</i> (Caltrans 2007). Both landscape character and visual quality contribute to community character. The landscape character of the various landscape units was described based upon the existence of physical features that influence them. For example, areas that contain crops, orchards, farm houses, and associated structures would be described as having a rural or agricultural landscape character. Areas that contain features such as tall buildings, a street grid, and parks might be described as having an urban landscape character. HST stations and parking structures would be designed or assigned criteria to identify and integrate local design features into design through a collaborative, context-sensitive solutions approach to match surrounding architecture types to help them aesthetically fit with their surroundings. Refer to Mitigation Measure AVR-MM#2a: Incorporate Design Criteria for Elevated and Station Elements That Can Adapt to Local Context. In general, the HST would be consistent with the landscape where located in proximity to other large infrastructure features. Mitigation measures will be applied to improve the visual compatibility of the HST within its landscape setting. For example, the visual mitigation of the HST components can incorporate art, colors, textures, and vegetation consistent with the existing landscape within the community. The Authority will coordinate and collaborate with local jurisdictions to determine the appropriate mitigation measures consistent with local design guidelines. For example, the Authority could incorporate elements of the <i>City-Wide Design Guidelines Adopted for the 2025 Fresno General Plan</i> that buildings be designed and sited so as to provide a strong functional relationship to the site and the neighborhood (City of Fresno 2002). Additionally, the city of Fresno, in cooperation with the Authority, has developed design guidelines for the HST project (City of Fresno 2013). Mitigation measures for adverse impacts to aesthetics and visual resources are presented in the EIR/EIS in Section 3.16.7, Mitigation Measures, and in Table 3.16-2, Characteristics of Typical HST Components. Section 3.16.4, Affected Environment, of the EIR/EIS and the Fresno to Bakersfield Section: Aesthetics and Visual Resources Technical Report (Authority and FRA 2012a) describe the landscape units, key viewpoints representative of conditions in the landscape unit, and existing visual quality. Section 3.16.5, Environmental Consequences, provides a summary of visual quality changes and impacts at key viewpoints.</p>

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	FB-Response-AVR-03: Mitigate or Minimize
<p>Many commenters expressed concern that the visual impacts of the HST would not be mitigated to an acceptable level, especially tall structures such as overcrossings. Others expressed that mitigation measures were not adequately identified and could not be deferred.</p>	<p>The design of the HST presents opportunities for the Authority to incorporate visual elements and structural modifications that can minimize or mitigate adverse impacts by the HST to aesthetics and visual quality. The EIR/EIS provides a variety of measures that can be used to address the distinct visual impacts to the built and natural environments. The mitigation measures included in Section 3.16.7 of the EIR/EIS attempt to provide visual compatibility of the project within its landscape setting. The two general tactics of mitigation are to aesthetically block, or to blend-in the HST-related components that are producing the impacts to the landscape. This can be done with screening (such as through the use of fencing, walls, earthen berms, and vegetation) or incorporating and reflecting features from the nearby landscape (or urban setting) into the design of the HST-related components. Examples include repeating nearby paving patterns, building styles, material colors, vegetation types, etc. The time it would take to establish these measures and the effort it would require to maintain them are two criteria that will be considered in selecting mitigation measures. For example, mitigation would be achieved more quickly when fast-growing species of vegetation are selected and irrigation is applied; mitigation would be maintained for a longer period when the durability and ease of cleaning are factored into the selection of construction materials. The selection of native vegetation and use of surface coatings that are resistant to weather and graffiti are specific examples of addressing these criteria. Some areas where the HST would be located could also have beneficial impacts by screening unattractive views, such as blighted areas. Art, lighting, and architectural materials also may be used to lessen the effects of project components, including the possibility of graffiti. Shielding and altering light direction will be used where appropriate to avoid and minimize potential impacts from lighting and shadows during construction and operation of the HST System, while providing adequate lighting for safety and security.</p> <p>The Authority will work with local jurisdictions to develop appropriate visual/aesthetic treatments. These treatments will need to reflect reasonable costs and meet engineering design parameters. Appropriate treatments will vary by location, but will be compatible with the context of areas adjacent to them. Once the Authority and local jurisdiction reach an agreement on the precise treatment, that information will be included in the design specifications and the Mitigation Monitoring and Enforcement Plan (MMEP). The MMEP specifies what the mitigation measure is, when it will be implemented, who is responsible for its implementation and who is responsible for documentation of completion. The mitigation measures will be specified during final design and implemented by the HST design-build contractor. Section 3.16.7, Mitigation Measures, in the EIR/EIS describes various methods for minimizing and mitigating the impacts of constructing and operating the HST. The EIR/EIS does not defer mitigation, but rather provides an extensive set of mitigation measures using performance standards that will be further reviewed, refined, and applied as design progresses and permits are obtained. In general, the mitigation measures presented in the EIR/EIS specify mitigation objectives and performance standards for addressing impacts (e.g., ‘...crowns of trees should ultimately be tall enough so that upon maturity they will partially, or fully, block or screen views of the elevated guideway...’). However, where site-specific impacts cannot be fully known or addressed at this stage of design, these can be addressed and measures further specified during subsequent design, review, and permitting. The Authority’s <i>Urban Design Guidelines for the California High Speed Train Project</i> (Authority 2012d) briefly discusses the principles of context-sensitive solutions to guide the design of stations. This approach is equally applicable to elevated guideways and will be employed to mitigate visual impacts through context-sensitive design. <i>Aesthetic Guidelines for Non-Station Structures</i> (TM 200-06; Authority 2011b) will also guide design of the HST components. The Authority could implement elements of local urban design or scenic resource policies, urban design guidelines, or other adopted local guidance on urban design, as they</p>

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	FB-Response-AVR-03: Mitigate or Minimize
	<p>apply to the HST project. For example, the Authority could implement elements of the <i>City-Wide Design Guidelines Adopted for the 2025 Fresno General Plan</i> that buildings be designed and sited so as to provide a strong functional relationship to the site and the neighborhood (City of Fresno 2002). The Authority will adhere to local jurisdiction construction requirements (if applicable) to minimize construction-related visual/aesthetic disruption.</p> <p>As discussed in EIR/EIS Section 3.16.6, a wide range of design features will be incorporated into project design to avoid or minimize potential aesthetic impacts as applicable. Where significant impacts cannot be avoided through project design, mitigation measures would be applied to reduce impacts. However, where the degree of effectiveness of such measures is dependent on site- or design-specific factors that are not yet known, the residual impact after mitigation, provided in Table 3.16-5, is assumed to be significant.</p>

Comment Summary	Response
AESTHETICS AND VISUAL RESOURCES	FB-Response-AVR-04: Overpasses and Elevated Guideways
<p>Most commenters did not like overpasses as opposed to underpasses.</p>	<p>The HST Project would require construction of underpasses, overpasses, trenches below-grade, and elevated guideways on concrete piers or retained fill to provide grade separations for at-grade roads and railroad tracks. Changes to the natural grade to accommodate the HST, whether by added fill or a cut trench, can break the continuity of the landscape and reduce visual quality. Factors that were considered in determining the potential level of adverse impact from HST grade-separation components were the location, number, and sensitivity of viewers. If the HST would not be readily seen by viewers, and/or the grade separation would be a consistent landscape element in an existing transportation corridor, the potential adverse impacts to aesthetics and visual quality would be reduced. The introduction of an HST structural component to provide a grade-separation would not necessarily result in a significant or substantial adverse impact to aesthetics and visual quality. There are several modifications to the landscape, and choices for structural components, that to an extent may minimize or mitigate the adverse impacts. Section 3.16.7, Mitigation Measures, in the EIR/EIS describes these various methods related to constructing and operating the HST, which would be considered with community input.</p> <p>Because of engineering and structural requirements for safety and performance, opportunities to reduce a blocked view from an overpass or elevated guideway are rare once the centerline and grade of the HST are established. Sometimes an earthen berm can be used to supplement or replace a retaining wall or pier-supported structure; however, this also may increase, not reduce, the size, footprint, and bulk of the constructed grade-separation. HST components can be made more attractive through design. For example, large-scale HST components such as retaining walls, earthen berms, and support structures can be designed to incorporate context-sensitive features such as patterns, landscaping, and color. Such mitigation measures will be determined in coordination and collaboration with local jurisdictions, residents, and community leaders in regard to the applicable local design guidelines and measures that are most context-appropriate.</p>

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	FB-Response-CUL-01: Documentation of Existing/Additional Built Environment Resources
<p>Commenters expressed concern that historic built environment resources were not adequately documented, particularly the Bakersfield High School campus.</p> <p>Commenters were concerned that the archaeological survey was not completed prior to the Draft EIR/EIS. With the absence of a complete survey, there were also concerns about assessment of impacts and mitigation measures.</p> <p>Commenters requested more detail describing the assessment of impacts.</p>	<p>The FRA and the Authority recognize the value of historic and cultural resources to both rural and urban communities. All historic-period built environment resources were identified and evaluated in accordance with Section 106 of the National Historic Preservation Act (NHPA), as well as NEPA, CEQA, and the Section 106 Programmatic Agreement, which constitutes an agreement between the State Historic Preservation Officer (SHPO), the Authority, the FRA, and Native American tribes, on how the compliance with Section 106 will be implemented. The procedures for the identification and treatment of historic properties are described in Section VI (Identification of Historic Properties), Section VII (Assessment of Adverse Effects), and Section VIII (Treatment of Historic Properties) of the PA. The PA is included as Appendix 3.17-A of the EIR/EIS. Detailed information regarding the identified resources is documented in the cultural resources technical reports prepared in support of the EIR/EIS, including the Historic Property Survey Report (HPSR) and the Historic Architectural Survey Report (HASR).</p> <p>Bakersfield High School was examined for eligibility for listing on the National Register of Historic Places (NRHP) and is discussed in greater detail in Section 3.17.4, Affected Environment. In summary, Harvey Auditorium is the only building on the campus that is eligible for the NRHP. The building has been determined eligible for the NRHP under Criterion C as a significant example of local master architect Charles Biggar, who designed several important Bakersfield buildings. The remaining buildings of the high school have been determined to lack integrity as a district and do not adequately convey historical significance under 36 CFR Part 800 and CEQA Section 15064.5. This finding was concurred with by the SHPO in February 2012.</p> <p><i>Level of Detail Regarding Effects in EIR/EIS</i></p> <p>Direct and indirect adverse effects on NRHP-listed or eligible resources are assessed in accordance with the PA and Section 106 of the NHPA, 36 CFR 800.5 (Assessment of Adverse Effects). Effects assessments are presented in the EIR/EIS and discussed in greater detail in the Findings of Effect (FOE) report. The FOE describes the assessment of potential adverse effects on historic properties that would result from the construction or operation of the project and identifies mitigation measures that would eliminate or minimize such effects (see mitigation measures CUL-MM#7: Avoid and/or Monitor Adverse Construction Vibration Effects and CUL-MM#8: Implement Protection and/or Stabilization Measures). These mitigation measures will be incorporated into project design and construction documents and will be monitored and enforced consistent with the MMEP. The development of the FOE is governed by the PA and is subject to reviews and concurrence by the SHPO and reviews and comments from consulting parties, such as City governments and Counties that wish to participate as stakeholders in the Section 106 process.</p> <p><i>Cultural Resource Surveys</i></p> <p>Authority personnel cannot access private property to conduct surveys unless the landowner grants access. Pedestrian cultural resources field surveys were conducted in areas where private property owners granted access or where access was otherwise available. Archaeological sites and sensitive areas were identified as part of</p>

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	FB-Response-CUL-01: Documentation of Existing/Additional Built Environment Resources
	<p>each of the project alternatives. Under Section VI.E (Phased identification and subsequent development of Memoranda of Agreement (MOAs)) of the PA, phased identification may occur in situations where identification of historic properties cannot be completed, as is currently the case. Once an alignment alternative is selected and access to as-yet-unsurveyed parcels is made available to the cultural resources investigation team, additional intensive field surveys will be completed to confirm the presence or absence of additional cultural resources within the project's APE. The procedures guiding the identification and treatment of historic properties (including archaeological resources) are described in Section VI (Identification of Historic Properties), Section VII (Assessment of Adverse Effects), and Section VIII (Treatment of Historic Properties and development of MOAs) of the PA. The PA is included as Appendix 3.17-A of the EIR/EIS.</p> <p>Specific mitigation measures CUL-MM#2: Conduct Archaeological Training, CUL-MM#3: Conduct Monitoring in Areas of Sensitivity, Halt Work in the Event of an Archaeological Discovery, and CUL-MM#4: Comply with State and Federal Law for Human Remains, and CUL-MM#5: Conduct Preconstruction Geoarchaeological Testing in Proximity to CA-KER-2507 will provide additional protection in case unanticipated archeological resources are encountered during construction.</p>

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	FB-Response-CUL-02: Documentation of Existing/Additional Archaeological Resources
<p>Commenters expressed concern regarding adequate identification and possible destruction of cultural resources, including cultural landscapes and traditional cultural areas. Several of the commenters provided general location information regarding archaeological resources of concern.</p>	<p>Efforts to identify and evaluate archaeological resources were conducted in accordance with Section 106 of the NHPA, as well as NEPA, CEQA, and the Section 106 Programmatic Agreement, which constitutes an agreement between the State Historic Preservation Officer (SHPO), the Authority, the FRA, the Advisory Council for Historic Preservation, and concurring parties represented by Native American tribes, on how the compliance with Section 106 will be implemented. The procedures for the identification and treatment of historic properties are described in Section VI (Identification of Historic Properties), Section VII (Assessment of Adverse Effects), and Section VIII (Treatment of Historic Properties) of the PA. The PA is included as Appendix 3.17-A of the EIR/EIS. The cultural resources identification effort for the proposed project consisted of literature and records research, consultation with knowledgeable individuals (including Native Americans, historical societies, museums, and historic preservation interest groups), and an intensive pedestrian field survey conducted by qualified cultural resources professionals in areas where private property owners granted access. Once access to as-yet-unsurveyed parcels is made available to the cultural resources investigation team, additional intensive field surveys will be completed to confirm the presence or absence of additional cultural resources within the project's Area of Potential Effect (APE). Commenters indicating that they have information regarding the location of archaeological material will be contacted regarding these resources prior to or during these subsequent survey efforts. Further, as provided in CUL-MM#1 in Chapter 3.17 of the EIR/EIS, the implementation of the procedures outlined in the Section 106 Programmatic Agreement and subsequent MOA serve as an enforceable agreement to treat and mitigate potential effects or impacts to cultural resources identified as the project proceeds.</p> <p>The built environment resources identification and evaluation studies took into account all possible historic architectural property types, including buildings, structures, objects, districts, sites, and historic landscapes. These property types were identified and evaluated for potential eligibility for listing in the National Register of Historic Places and the California Register of Historical Resources. This analysis was conducted in accordance with Section 106 of NHPA, and CEQA as it pertains to historical resources.</p>

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	FB-Response-CUL-03: Mitigation Measures
<p>The comments addressed several resources, including some that are not eligible (and therefore do not require mitigation). Commenters also expressed concern about a lack of detailed mitigation measures in the EIR/EIS.</p>	<p>The mitigation measures described in Section 3.17.6 of the EIR/EIS are considered the most effective and feasible mitigations to resolve adverse effects to Section 106 (NEPA) eligible properties or to mitigate impacts to less than significant levels to California Register of Historic Resources or CEQA eligible historical resources. However, while individual circumstances may not allow for the reduction of significance to less than significant level, implementation of the mitigation will reduce or compensate for the loss of a property or resource. Under CEQA, the destruction of a historical resource cannot be mitigated to a less than significant level. In many cases the specific mitigation applied to a particular property will be determined during the process of developing a Finding of Effect (FOE) and subsequent Memoranda of Agreement (MOAs) as part of the Authority's compliance with the Section 106 Programmatic Agreement (PA). In accordance with the PA, a Built Environment Treatment Plan (BETP) and an Archaeological Treatment Plan (ATP) will be prepared and implemented, subject to approval of the State Historic Preservation Officer, to resolve any potential adverse effects to NRHP-listed or -eligible historic and archaeological properties or potential impacts to CEQA historical resources (including archaeological resources). These treatment plans describe detailed requirements for the treatment of resources affected by the project, site monitoring during construction, handling of unanticipated discoveries, data recovery, and curation of artifacts, among other things. In accordance with the PA, the mitigation of impacts to historic properties (and the development of Memoranda of Agreement) and historical resources is being developed with input from consulting parties, which include local city and county jurisdictions, as well as local Native American representatives. The PA is included as Appendix 3.17-A of the EIR/EIS.</p> <p>Resources that were evaluated for potential eligibility for listing in the National Register of Historic Places and the California Register of Historical Resources and found not eligible for listing and do not come within other CEQA significance criteria are not "historic properties," and as such do not require mitigation under Section 106 of NHPA, or CEQA as it pertains to historical resources.</p> <p>In addition, the EIR/EIS includes specific and detailed mitigation measures for archaeological, historic architectural, and paleontological impacts (see mitigation measures CUL-MM#1 through CUL-MM#18).</p>

Comment Summary	Response
CULTURAL AND PALEONTOLOGICAL RESOURCES	FB-Response-CUL-04: Additional Interested Parties/Consulting Parties
<p>Commenters suggested additional consulting and interested parties be contacted during the consultation process. Several commenters recommended making contact with additional Native American liaisons. Commenters recommended regular meetings with tribes and lead agencies.</p>	<p>The consultation process is discussed in detail in the Section 106 Programmatic Agreement (PA), Section IV (Ongoing Consultation with Native American Tribes) and Section V (Participation of Other Consulting Parties and the Public), which has been conducted throughout the development of the EIR/EIS. The PA is included as Appendix 3.17-A of the EIR/EIS. The PA constitutes an agreement between the State Historic Preservation Officer (SHPO), the Authority, the FRA, and Native American tribes, on how the compliance with Section 106 will be implemented. Part of these stipulations is the requirement to inquire with knowledgeable individuals or groups to seek their involvement in the process of developing the Memoranda of Agreement (MOAs) documents, which deal specifically with deciding on which types of mitigation measures that the parties involved agree will successfully minimize or reduce adverse effects to historical properties. Cultural resource outreach efforts to date include letters, telephone calls, emails, and meetings. As part of this consultation, members of the Native American community will continue to be involved in the process of identifying resources of concern and the evaluation of those resources. Interested and consulting parties, including Tribal representatives, will continue to be informed and involved as project planning continues. The outreach efforts are further discusses both in Chapter 7 and 3.17 of the EIR/EIS.</p>

